



November 2013

Rhodophyllus Notebook 2

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LEPTONIA CHALYBAEA (Fr.) Kummer

Der Führer in die Pilzk., p. 96. 1871

Agaricus chalybaeus Fr., Syst. Myc., p. 203. 1821.

Rhodophyllus chalybaeus (Fr.) Quéél., Assoc. Fr. Av. Sci. Compte Rendu 142. 1886.

Acurtis chalybeus (Pers. ex Fr.) Sing., Persoonia 2: 14. 1961.

Pileus 1.5-2.5 cm broad, campanulate, depressed, more rarely with a nipple, dark-violet to violet-black, glabrous then floccose-scaly, margin inflexed, not striate. Context thin; *blue*.

Lamellae emarginate-adnexed, blue-gray when young, edges pale, subserrulate, subdistant, ventricose.

Stipe (2)4-5 cm x 2-3 mm, dark-violet or blue, glabrous, base white-mycelioid.

Spores 9-11 x 6-8 μ , 5-6-sided. Basidia 28-36 x 8.5-10 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 38-65 x 5-8 μ , cylindric to sub-clavate, at times subclavate, fuscous to colorless. Gill trama subparallel, hyphae 4-8 μ broad. Pileus trama radial (appearing cellular in tangential sections). Cuticle repent, with numerous more or less clavate to cylindric, dark fuscous or brownish pilocystidia. Clamps none. Lactifers present, few in pileus trama.

Habit, Habitat, and Distribution - On grassy soil, Europe.

Material Studied - SWEDEN: Lloyd, No. 673 - This may be cyanulus; SCOTLAND: Orton, No. 1262; IRELAND: Dennis, Aug. 29, 1946.

Observations - The description of macroscopic characters above is based on Fries (1821), and on Ricken (1915). The description of microscopic characters above is based on a study of the Dennis collection from Ireland. The collection of Orton, cited above, agrees with that of Dennis. Kühner and Romagnesi (p. 209) point out that it differs from serrulata by its ventricose lamellae, the edges of which are pale. They are of the opinion that L. chalybaea sensu Bres. is a form of L. serrulata without blue-black gill-edges.

LEPTONIA CHALYBEA Pers.

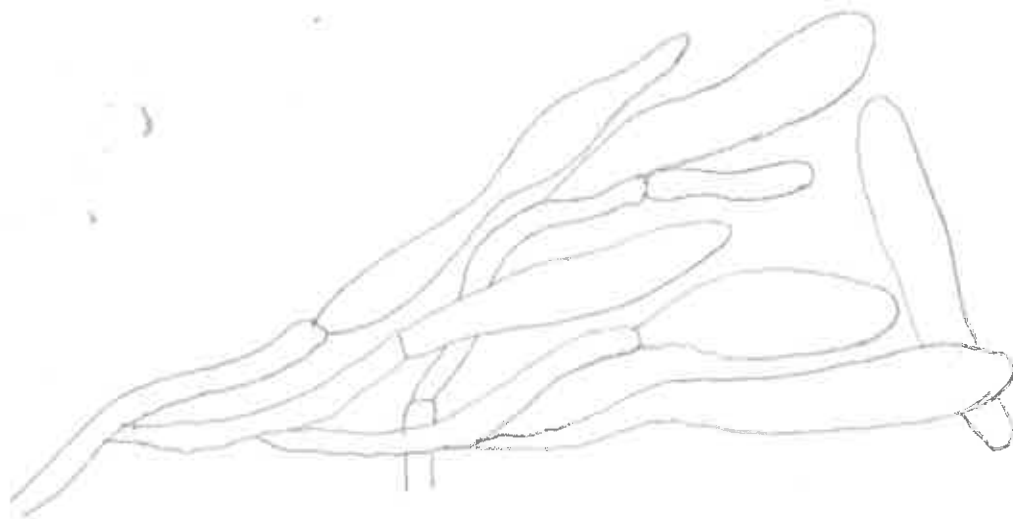
Collection from Stockholm, Mus. Botan., No. 673, by C. G. Lloyd, 1903.

Spores 10-12 x 7-8 μ , 5-7-sided, at times indistinctly so. Basidia 32-38 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel. Pileus trama radial. Cuticle repent, with numerous brown, versiform (cylindric, clavate, fusoid, at times constricted) pilocystidia, which are repent to erect, more or less in clusters (forming fibrillose scales). Clamps and lactifers none.

This seems to be R. (Leptonia) cyanulus sensu Lange (Pl. 77, Fig. F).

Leptonia chalybea Pers.

Stockholm, C.G. Lloyd coll. no. 673

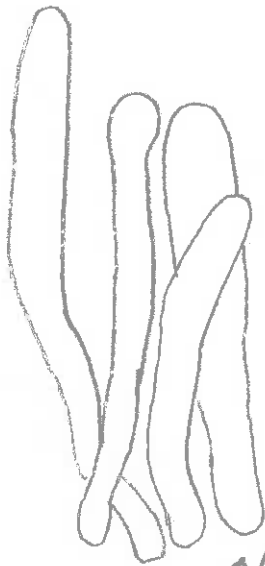


LEPTONIA CHALYBAEA (Fr.) Kummer

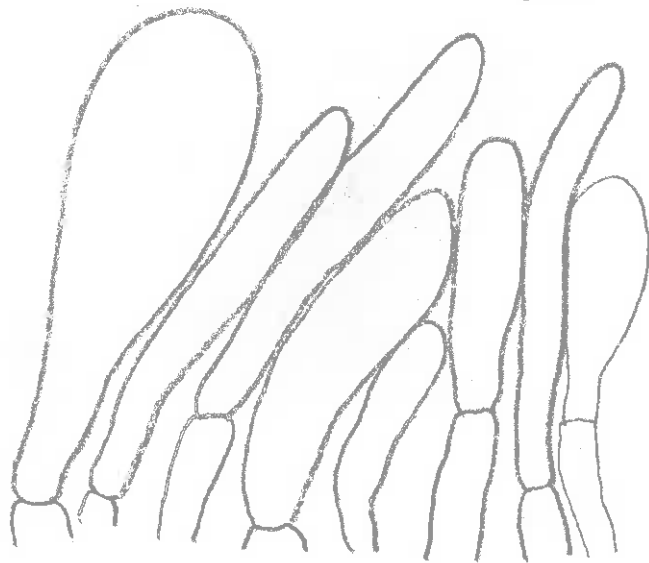
from Edinburgh, Royal Bot. Garden, Coll. P. D. Orton, No.
1262, Oct. 27, 1957, Membury, Devon.

Spores 10-12 x 7-8.5 μ , 6-sided, often obscurely 5-6-7-sided.
Basidia 31-38 x 8-10 μ , 2-4-spored. Pleurocystidia none;
cheilocystidia 47-76 x 6-9 μ , cylindric to clavate, rarely
subcapitate, fuscous, absent in many sections. Gill trama
subparallel, hyphae 5-9 μ broad. Pileus trama radial (appearing
cellular in tangential sections). Cuticle repent, with tufts of
fuscous, cylindric to clavate pilocystidia. Clamps and lactifers
none.

Leptonia chalybaea (Fr.) Kummer
from Edinburgh, C. D. Orlon, No. 1262, Oct. 29, 1957



Ch - $\times 1000$



Pseudocystidia - $\times 1000$

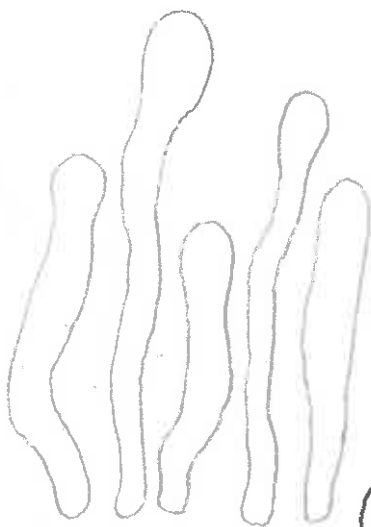
LEPTONIA CHALYBAEA

from Kew, leg. R. W. G. Dennis, det. A. A. Pearson, Ireland,
Aug. 29, 1946,

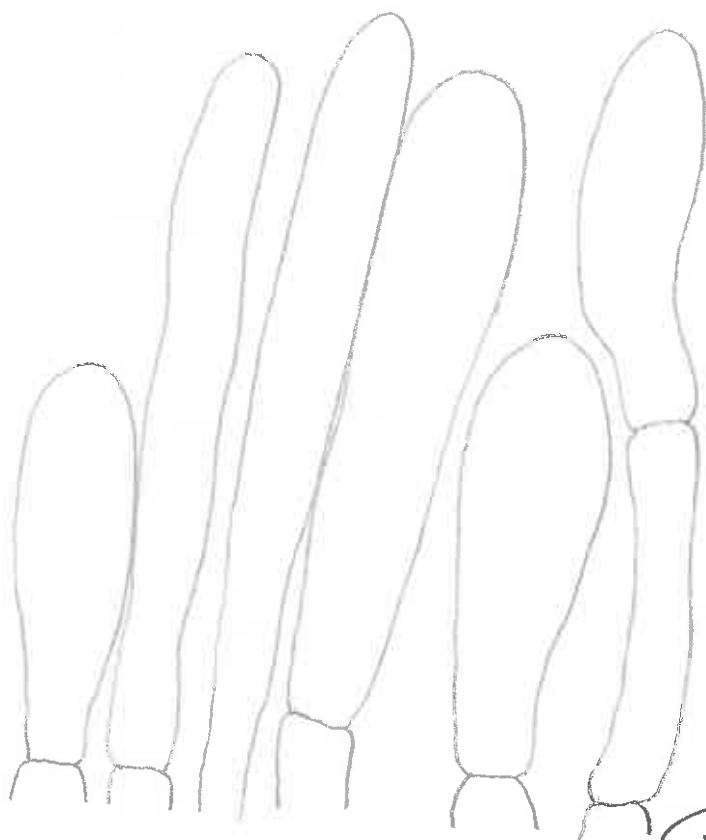
Spores 9-11 x 6-8 μ , 5-6-sided. Basidia 28-36 x 8.5-10 μ ,
2-4-spored. Pleurocystidia none; cheilocystidia 38-65 x 5-8 μ ,
cylindric to sub-clavate, at times subclavate, ^{fuscescent to} colorless. Gill
trama subparallel, hyphae 4-8 μ broad. Pileus trama radial
(^{appearing cellular} ~~as cells~~ in tangential sections). Cuticle repent, with
numerous more or less clavate to cylindric, dark fuscous or
brownish pilocystidia. Clamps none. Lactifers present, few
in pileus trama.

Leptonia chalybaea

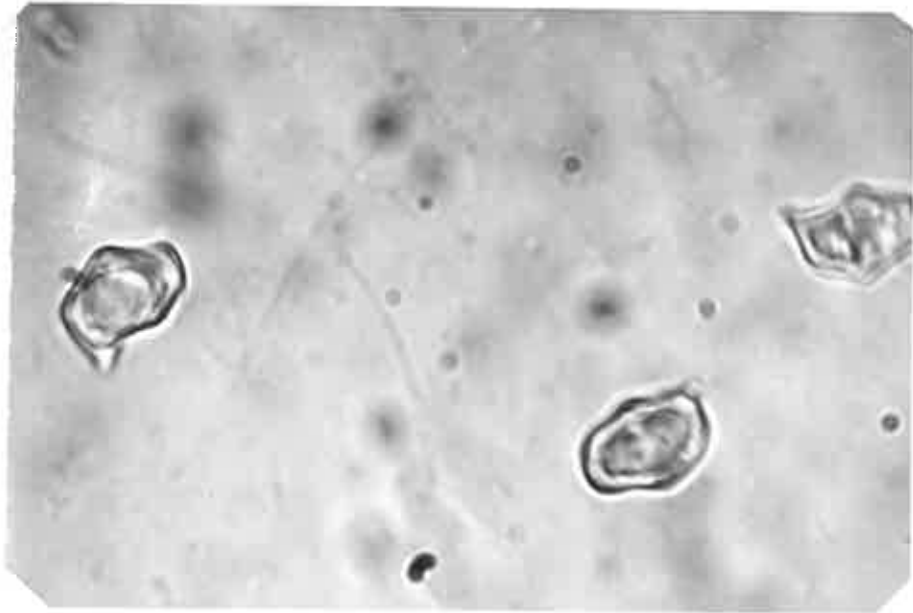
from Kew, det. ^{Pearson} ~~Reed~~, from Ireland, Aug. 29, 1946



Ch - x 1000



Piloscyptidia - x 1000



Leptonia chalybaea (Fr.) Kummer (from Kew)

X 1800

NOLANEA CHLOROLIVACEA Atk.

Ann. Myc. 7:372. 1909

Pileus 1-1.5 cm. broad, campanulate, bright-olive-green, shining, silky, finely fibrous-striate. Context thin, dark; odor weak of soft soap.

Lamellae adnexed, oblanceolate (broad and rounded in front), tapering gradually behind, medium close, brown ("bistre"), tinged flesh color.

Stipe 2 cm. x 2.5 mm., even, solid then hollow, cartilaginous, minutely floccose scaly, flesh dark.

Spores 10-12 ($1\frac{1}{4}$) x 7-8 μ , 5-7-sided, at times obscurely 6-7-8-sided, ~~symmetrical~~. Basidia $3\frac{1}{4}$ -42 x 10-12 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 42-57 x 5-17 μ , fusoid, clavate, or sub-cylindric, often with a prominent neck (appendiculate), absent in many sections. Subhymenium a narrow zone of small cells. Gill trama subparallel. Pileus trama radial, ~~(appearing as pseudoparenchyma in tangential sections)~~. Cuticle ^{and bearing} ~~with~~ a trichodermium, the terminal elements as granulated, clavate pilocystidia.

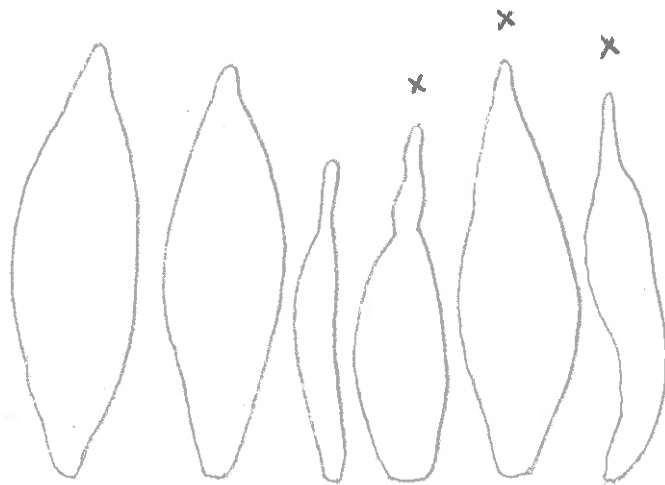
Habit, habitat, and distribution. - On soil, in woods, New York, August.

Material studied. - NEW YORK: Atkinson No. 18500, type, collected by Jackson, from McGowan's woods, Ithaca, Aug. 11, 1904.

Observations. - Although Atkinson reports cystidia "few on sides of gills, more abundant near and on the edge," I failed to find any pleurocystidia at all in the type. *Atkinson says it is related to N. pissiadora,*

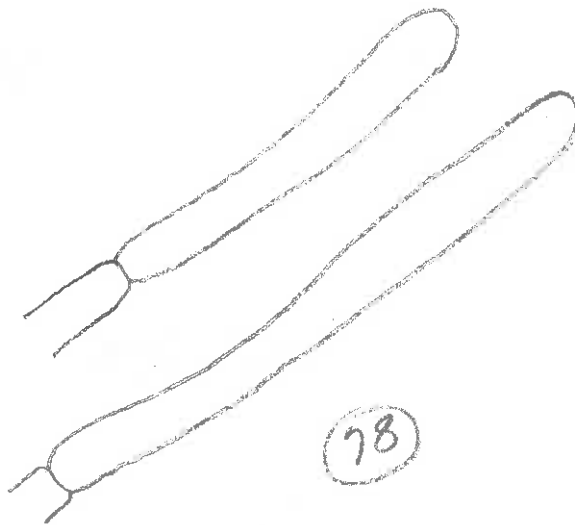
Nolanea chlorolivacea Att.

No. 18500 (probably the type)



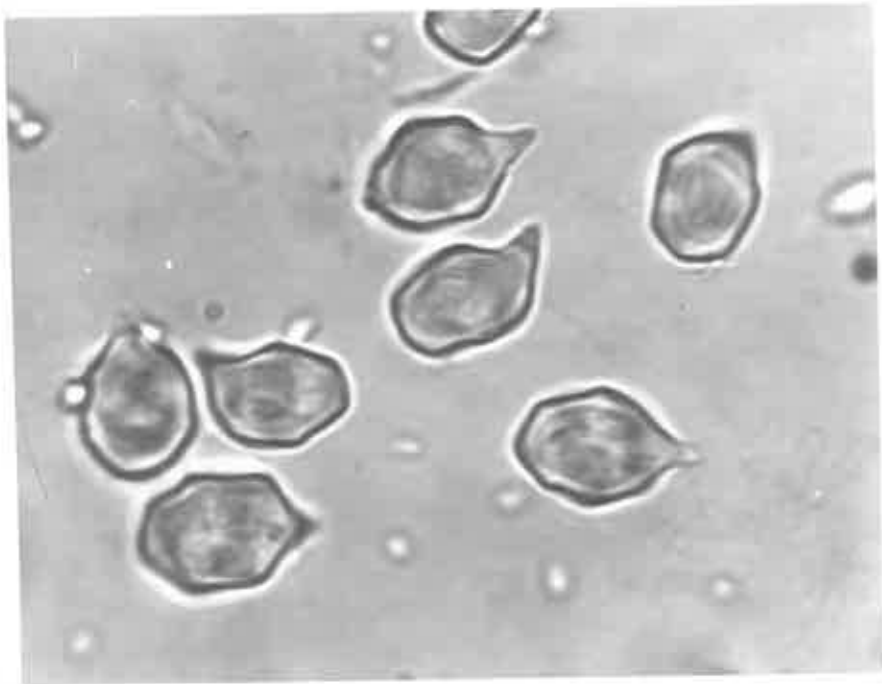
Ch - x 1000

(77)

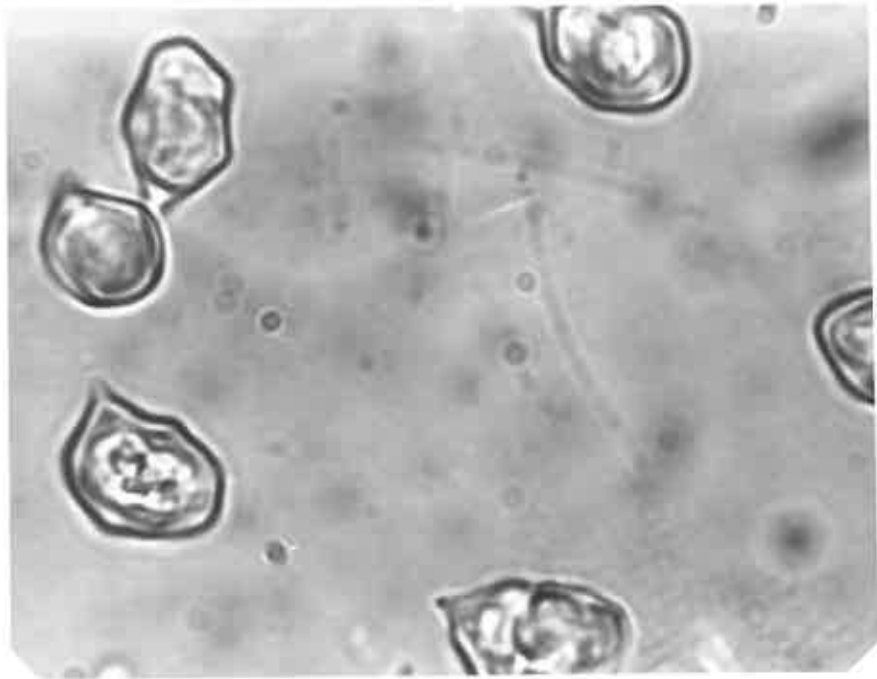


(78)

Pilocystidia - x 1000

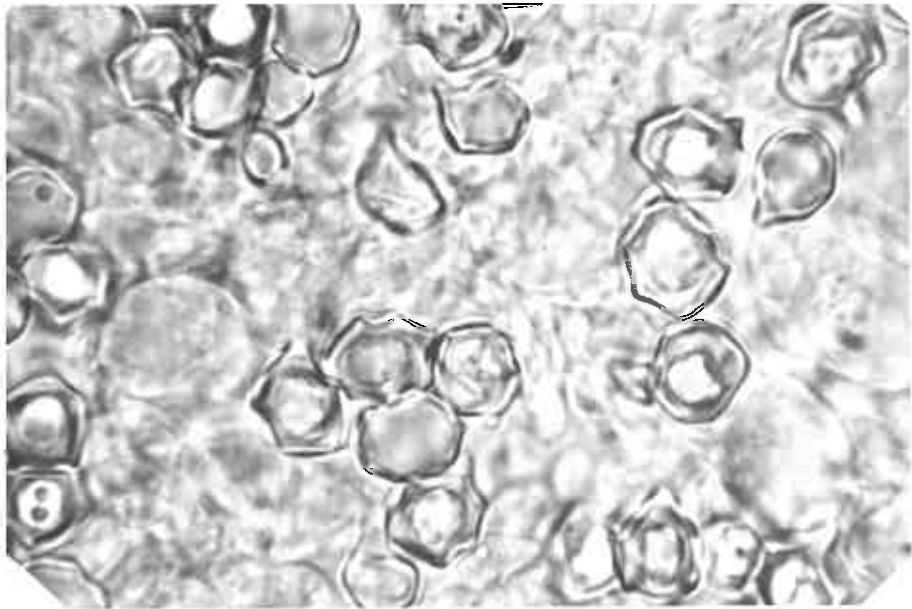


Nolanea chlorolivacea Atk.



Leptonia cinchonensis (Murr.) Murr.

x 2600



~~Entoloma albidum Murr.~~ - Type
R. cinerascens
X 1700

23518

Cinerascens
ENTOLOMA ALBIDUM ~~Murr.~~

Photo

Pileus 3-6 cm. broad, convex, expanding, finally very slightly depressed, hygrophanous, pallid grayish when wet, shining-white when dry, appressed radiately-silky, margin inrolled, even when dry, striatulate when wet. Context white, fragile; odor mild, taste slightly farinaceous-bitter.

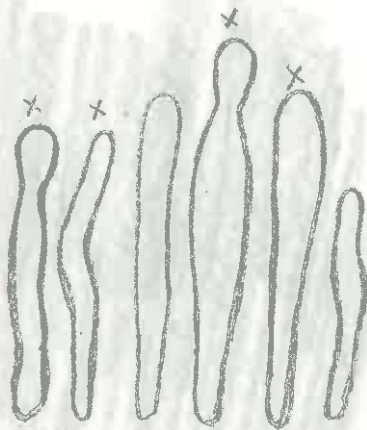
^{white then}
Lamellae adnexed, [^]"vinaceous cinnamon," close to nearly crowded, medium narrow, many short, edges nearly even.

Stipe 5-9 cm. x 6-10 mm., shining-white, apex squamulose, elsewhere fibrillose, equal or tapering upward slightly, base more or less curved, stuffed then hollow.

Spores 8.5-10.5 x 7-8 μ , 5-6-sided, subglobose, ovoid, or short-ellipsoid, color in deposit "orange cinnamon". Basidia 28-35 x 8-10 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 30-48 x 3-7 μ , cylindric, clavate, at times subcapitate, usually inconspicuous, absent in many sections. Gill trama subparallel, hyphae 7-15 μ broad. Pileus trama radial. Cuticle repent, rarely an occasional hypha ~~x~~ more or less erect. Clamps and lactifers none.

Agrees well with the type, dried. But, Murrill says it was tinged avellaneous in age (I saw no old specimens).

Eutoloma albidum Murr.
R. cinerascens
No. 23518



(119)

Ch - X 1000

23518 - ~~Eutoloma albidum~~
R. cinerascens

Pileus 2-3 cm broad, convex, expanding, slightly or not at all hygrophanous, grayish to grayish brown (not matched), disc fibrillose-squamulose, elsewhere fibrillose, glabrescent, shining (dry), margin even. Context thin, grayish; odor and taste mild.

Lamellae adnexed to emarginate, at first grayish-ashy, then "drab," nearly subdistant, broad, many lamellulae (of 4-ranks), edges fimbriate to even.

Stipe 1.5-2 cm long, 4-10 mm thick, often compressed, tapering downward, pallid to dingy grayish, silky above, elsewhere fibrillose, glabrescent.

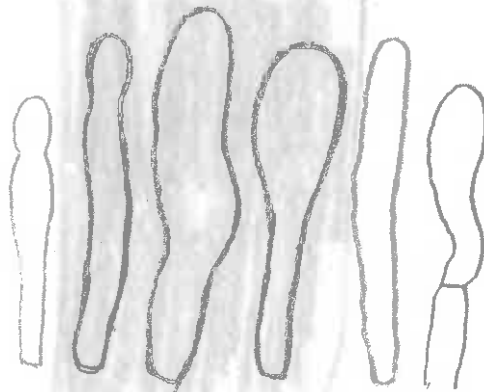
Spores 8-11 x 6-7 μ , 6-7 (8)-sided, or so, wavy-angular or wavy-nodulose, color in deposit: "vinaceous cinnamon." Basidia 36-45 x 8-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 28-48 x 5-10 μ , few, cylindric to clavate. Gill trama subparallel, hyphae 5-12 μ broad. Pileus trama radial. Subhymenium not distinctive. Cuticle repent with numerous more or less erect and loosely tangled fuscous hyphae — a trichodermium. Clamp connections and lactifers none.

OBSERVATIONS - This seems close to Smith's No. 29445; he has written it up. Near griseum which is farinaceous, and has no cheilocystidia. E. minus is glabrous, lamellae white, no cheilocystidia. E. murinipes lacks cheilocystidia. E. murinum

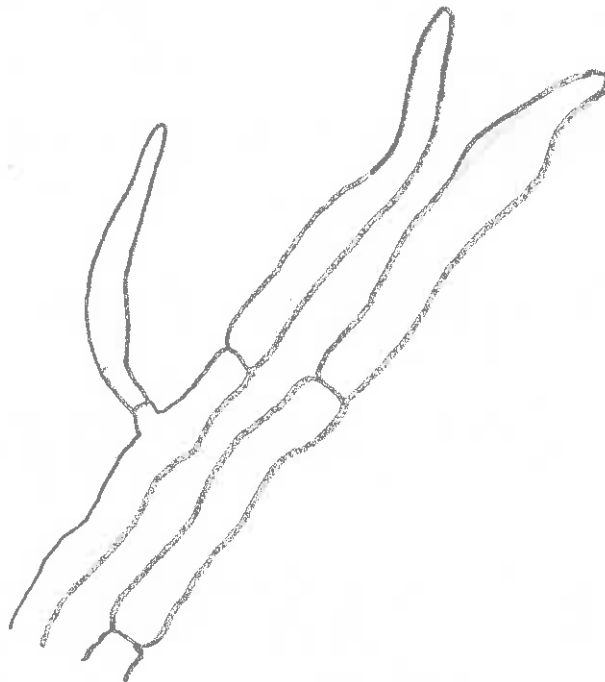
2/637

lacks cheilocystidia. E. pallidibrunneum is umbilicate, hygrophanous, stipe longer but thinner (4-6 cm x 3-4 mm). Differs from jubatum which has a longer stipe, an umbonate pileus, and slightly different cheilocystidia.

Eutoloma No. 21634
cinereum



Ch - x 1000



Epiauticular hyphae - x 1000

LEPTONIA CINERICOLA (Pk.)

Eccilia cinericola Pk., Torrey Bot. Club Bull. 34:347. 1907.

Pileus 1.2-2.5 cm broad, broadly convex, becoming expanded and broadly umbilicate or centrally depressed, white tinged yellow, becoming cream-colored in age, glabrous or slightly scabrous. Context thin.

Lamellae adnate or slightly decurrent, sometimes slightly sinuate, white, becoming pink, distant, broad.

Stipe 2-2.5 cm x 2 mm, white, becoming concolorous with the pileus, subcartilaginous, fragile, hollow, apex slightly enlarged.

Spores 10-12(15) x 8-10 μ , 7-9-sided, often obscurely 7-8-9-10-sided. Basidia 30-35 x 9-11 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-12 μ broad. Pileus trama radial. Cuticle repent, at times loosened hyphal clusters become more or less erect. Clamp connections and lactifers none.

Habit, Habitat, and Distribution - On gravelly soil, among grass, especially where coal ashes have been lying for a long time, Massachusetts, June.

Material Studied - MASSACHUSETTS: Peck, the type, from Boston, June 11, 1907, collected by S. Davis.

Observations - ^{description of} The microscopic characters given above
^

^{is}
~~are~~ based on a study of the type. This appears close to L.
cephalotricha Orton (1960:291), which is a white species becoming
pinkish or dirty yellowish but has smaller spores, ~~and~~ peculiar,
cylindric-capitate hyphal cells on the pileus and at the stipe
apex, ^{and has a mealy odor.} Orton points out that L. sericella is more robust and
lacks these capitate cells.

NOLANEA CLANDESTINA (Fr.) Qué1.

ex-Stockholm Herb., leg. & det. H. Romagnesi, Oct. 26, 1944,
among moss, mixed woods, Pontcarré.

Spores 9.5-12 x 6-8 μ , 5-6(7)-sided, angles sometimes rounded. Basidia 28-38 x 9-10 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama slightly interwoven, hyphae 2-4 μ broad, gills thin. Pileus trama thin, radial. Cuticle radial.

24909

ENTOLOMA CLAVIPES sp. nov.

TYPE
PHOTO

Pileus 2-3.5 cm broad, convex or sub-campanulate, at times obtusely umbonate, hygrophanous, smoky gray-brown (near "light drab"), appressed-fibrillose (sub-virgate under lens), margin even. Context white, thick on disc, thin on margin; odor mild, taste slightly farinaceous.

Lamellae emarginate, white, becoming dingy pink, medium close, rather narrow, many lamellulae, edges rough.

Stipe 5-7 cm long, 5-7 mm thick, whitish, apex white pruinose, elsewhere slightly fibrillose, tapering upward from a clavate base, base white floccose-mycelioid, hollow.

Spores 8-10 x 7-7.5 μ , ellipsoid to ovoid, 5-6-sided. Basidia 35-46 x 8-10 μ , mostly 2-spored, a few 4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-8 μ broad. Subhymenium a narrow gelatinous zone. Pileus trama radial. Cuticle of repent, narrow, colorless hyphae with an occasional more or less uplifted hyphal end. Pilocystidia and lactifers none. Clamp connections few on the gill trama hyphae.

NOLANEA CLINTONIANA (Pk.) Sacc.

Syll. Fung. 5:723. 1887

Agaricus clintonianus Pk., N. Y. State Mus. Ann. Rept. 24:67. 1872.

Pileus 2.5-3.5 cm. broad, broadly conic, sometimes expanded, whitish or light-gray, a little darker and scabrous-squamulose on the disc, margin wavy and striate. Context thin.

Lamellae nearly free to adnate-subdecurrent, whitish then flesh-colored, narrow (according to Peck; type specimens show broad gills), crowded, easily separating from the stipe.

Stipe 5-10 cm. x scarcely 2 mm., white, sometimes slightly tinged yellow, smooth, base white-mycelioid, hollow, equal.

Spores 9-12 x 6-7 μ , 5-6-sided, at times obscurely so, a few more or less nodulose, ~~hardly symmetrical~~. (Basidia unfit for study). Pleurocystidia and cheilocystidia none. Gill trama ~~broad~~. subparallel, hyphae 4-6 μ . Pileus trama radial. Cuticle repent. No pilocystidia found. Clamp connections and lactifers none.

Habit, habitat, and distribution. - On soil, in swamps, New York.

Material studied. - NEW YORK: Peck, the type, from Sandlake.

Observations. - Although the disc is described as scabrous-squamulose, and despite the fact that sections were made through the disc, I found no pilocystidia. It is possible that the scales are entirely of hyphal tufts, *although I saw none.*

ENTOLOMA CLYPEATUM (L.) Fr.

Ex-Herb Kew: Under hawthorn, Sandpits, Grovebury Rd., Leighton, Buzzard, May 17, 1953, D. A. Reid.

Spores 8.5-10(11) x 7-9 μ , subglobose to subellipsoid, 6(7)-sided. Basidia 35-43 x 10-13 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama a mediostrate, hyphae subparallel, 4-10(12) μ broad, flanked by a gelatinous subhymenium. Pileus trama radial. Cuticle a narrow, gelatinous zone. Pilocystidia none. Clamp connections none observed.

On the packet of another collection (Slindon, Sussex, 9.8. 1965) Reid says: "Smell of meal. Horn brown-grey cap and stem. Flesh in cap faintly greyish."

In this collection: Spores and other as in Reid's May 17, 1935 collection (notes above), except subhymenium is less gelatinous than in above.

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Ex-Herb Kew: Under hawthorn, Sandpits, Grovebury Rd., Leighton, Buzzard, May 17, 1953, D. A. Reid.

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On the packet of another collection (Slindon, Sussex, 9.8. 1965) Reid says: "Smell of meal. Horn brown-grey cap and stem. Flesh in cap faintly greyish."

In this collection: Spores and other as in Reid's May 17, 1935 collection (notes above), except subhymenium is less gelatinous than in above.

Pileus 2-6 cm broad, convex, subexpanding-convex to plane, not umbonate, moist, viscid, grayish-brown, innately fibrillose (virgate and slightly rugulose) margin inrolled, even. Context white, thin; odor and taste farinaceous.

Lamellae adnate then sinuate, white then flesh color, close, medium broad to rather narrow, edges even.

Stipe 4-8 cm x 6-10 mm, pallid, apex mealy, elsewhere glabrous, equal, base at times curved.

Spores 8-10 x 6-7(8) μ , 5-6-sided. Basidia 32-37 x 9-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-8 μ broad, a mediostrate. Subhymenium gelatinous. Pileus trama radial. Cuticle a very thin zone of colorless, gelatinous, repent, more or less radial hyphae, sometimes a few hyphae uplifted. Clamp connections and lactifers none.

23875

ENTOLOMA CLYPEATUM (Fr.) Kummer

(Notes by P. T. O.)

Leiden, Netherlands

Pileus 4-13 cm. across, at first conical with margin involute, later on expanded and margin undulate, bluntly umbonate, smooth when young and greasy to the touch, later minutely radially fibrillose, becoming rimose, little hygrophanous, grayish brown to cafe-au-lait tinged with grey. Context white, compact in top of stem and center of cap; odor farinaceous when bruised.

Lamellae emarginate, decurrent with a tooth, broad, ventricose, at first white, finally pinkish buff.

Stem 4.5-11.5 cm. x 6.5-16 mm., cylindrical, usually flexuous and tortuous, originally white, soon greyish brown (which would point to the species being Rh. aprilis), becoming hollow with age.

Notes by Hesler

Spores 8.5-10.5 x 7-8.5 μ , ovoid, subglobose to ellipsoid, 5-sided. Basidia 35-48 x 9-11 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, with a brown mediostrate, hyphae 5-8 μ broad. ^{Subhymenium gelatinous.} Pileus trama radial. Cuticle ^{a narrow gelatinous zone, of} ~~a brown~~ repent hyphae with numerous more or less uplifted hyphae; ~~which at times form a slight trichodermium~~ no pilocystidia. Clamps and lactifers none.

Notes by Bas. - In our region it is not possible to separate R. clypeatus and R. aprilis. I wonder if Romagnesi himself is able to do so. He wrote to me (Bas) that there exist intermediates and that he is unable to distinguish dried material even when there is an excellent description.

ENTOLOMA CLYPEATUM

In grassy and mossy ditch, Stockholm, Aug. 10, 1905,
leg. L. Romell (No. 9549).

Spores 8.5-10 x 7-8(8.5) μ , subglobose to short-ellipsoid
or ovoid, 5-6-sided. Basidia 42-53 x 9-12 μ , 4-spored. Pleuro-
cystidia and cheilocystidia none. Gill trama subparallel,
hyphae 2-5 μ broad, flanked by a gelatinous subhymenium. Pileus
trama radial. Cuticle a colorless narrow, gelatinous to sub-
gelatinous zone. Clamps and lactifers none. *Caulocystidia* few,
scattered, colorless, cylindric-clavate, 34-65 x 6-7 μ .
Seems to agree with Tenn-23875, from Bas (Netherlands),
but dried darker.

ENTOLOMA CLYPEATUM

Fine, St. Lawrence Co., N.Y., leg. Peck, Aug. 5, 1909.

Spores etc. all agree with Peck's Steuben Co., June '07
collection.

ENTOLOMA CLYPEATUM

North River, Warren Co., Ruby Mt., Sept. 3, Peck.

Spores 8-9.5 x 7.5-8 μ . Otherwise as in Romell collection.

ENTOLOMA CLYPEATUM

Greig, Lewis Co., Peck, Sept.

Spores 7.5-9.5 x (6.5)7-8 μ . Otherwise as in Romell collection.

ENTOLOMA CLYPEATUM

Greig, Lewis Co., Peck. No. 127. Sept.

Spores 8-10 x 7-8 μ . Otherwise as in Romell collection.

ENTOLOMA CLYPEATUM

Forge, North Elba, Essex Co., Peck, Aug.

Spores 7.5-9.5 \times 6.5-7.5(8) μ . Otherwise as in Romell collection.

ENTOLOMA CLYPEATUM

North Greenbush, Rensselaer Co., Peck, Oct.

Spores 8-10.5 x 7-8 μ . Otherwise as in Romell collection.

ENTOLOMA CLYPEATUM

Lake Pleasant, N.Y., leg. D.B. Young, Aug. (Peck Herb.)

Spores 8-10 x 7-8 μ . Otherwise as in Romell collection.

ENTOLOMA CLYPEATUM

New Jersey, leg. E. B. Sterling, 1907 (Peck Herb.).

Spores 8.5-10 x 7-8 μ . Otherwise as in Romell collection.

ENTOLOMA CLYPEATUM

Karner, Albany Co., leg. Chas. H. Peck, October.

Spores 8-10 x 7-8(8.5) μ . Otherwise like Romell collection.

ENTOLOMA CLYPEATUM

Coopers Plains, Steuben Co., leg. Peck, June 1907.

Spores 8.5-10 x 7.5-8.5(9) μ , subglobose, (5)6(-7)-sided.
Basidia 32-44 x 7-11 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 3-6 μ broad, flanked by a gelatinous zone. Pileus trama radial. Cuticle a narrow colorless gelatinous zone, resting on a brown zone.

Peck (Bull. 131:57) says E. strictius irregulare Pk.
(53rd Rept., p.856, pl. D, figs. 8-15) appears to belong here.

Agrees with Romell-9549 in gross and microscopic characters.

ENTOLOMA CLYPEATUM

Lynn, Mass., Geo. E. Morris, May 22, 1904, det. Peck.

This is not clypeatum; the spores and slender brown stipe suggest E. strictius.

Spores 10-13 x 7-8 μ , 5-sided, ellipsoid. Pleurocystidia and cheilocystidia none. Subhymenium not distinctive.

ENTOLOMA CLYPEATUM

Small form (=E. strictius irregulare Pk.). Co-type
Lansingburg, Rens. Co., Chas. H. Peck, May 7, 1899.

Spores 9-11.5 x 7-8.5 μ , ellipsoid or subovoid, 6-sided, at times angles not sharp. Basidia 28-35 x 8-10 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama slightly interwoven, hyphae 2-4 μ broad, brown. Subhymenium not distinctive. Pileus cuticle radial, repent, non-gelatinous. Clamps none.

If this is retained as var. irregulare, it should not be attached to E. clypeatum: The spores are ellipsoid or subovoid, and the subhymenium is not gelatinous.

Pileus (2.5) 4-10 cm broad, at first conic then hemispheric-campanulate to campanulate-convex, umbonate, finally expanded, olive-grayish, "deep olive buff" or "olive buff," disc often darker, at first canescent, glabrescent, hygrophanous, slightly viscid, cuticle separable nearly to disc, slightly virgate or radiately rugose (strongly so when wet), margin even. Context white, thick on disc, thin on margin; odor mild or farinaceous, taste farinaceous.

Lamellae deeply emarginate to sinuate, medium broad to broad, close or crowded, white, then pale flesh, finally "pinkish cinnamon," edges serrate-eroded.

Stipe (3) 6-12 cm long, (5) 9-20 mm thick, white or dingy, appressed, fibrillose-striate, firm and rather hard, equal or clavate, or tapering either way, base curved and pointed, solid, dry.

Spores 9-10.5 x 7-9 μ , subglobose to ellipsoid, 5-sided, occasionally obscurely 5-6-sided, in deposits: "cinnamon," "orange cinnamon," to "Mikado brown." Basidia 42-50 x 10-12 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-8 μ broad. Subhymenium gelatinous or slightly so. Pileus trama radial. Cuticle a narrow gelatinous zone, repent; no pilocystidia, a few hyphae more or less uplifted. Clamp connections and lactifers none.

40031

ENTOLOMA CLYPEATUM (Fr.) Kummer

On lawn, Tobler Rd., Knoxville, leg. A.J. Sharp, October 22, 1975.

Pileus 4.5-8 cm broad, convex, convex-expanding, rather dark smoky-grayish to near "hair brown" (not matched), glabrous, virgate, somewhat hygrophanous, visoid(?), margin even. Context pallid; odor slight (faintly pleasant), taste slowly subfarinaceous.

Lamellae adnexed, pallid, finally "vinaceous cinnamon", close, broad, none forking, lamellulae alternating, margins concolorous.

Stipe 5-8 cm long, 7-15 mm thick, whitish but faintly tinted as pileus-color, glabrous, equal base with a crook, easily splitting, dry.

Spores in deposit: "cinnamon"; spores 8-10 x 7-8.5 μ , 5-6-angled, often obscurely angled, often globose or subglobose. Pleurocystidia and cheilocystidia none.

See especially 23875, from Bas (Holland).

18605

NOLANEA COELESTINA (Fr.)

Pileus 15-20 mm, convex, then plane, sub-umbonate, dry, disc scaly, scales "dark heliotrope-slate," elsewhere fibrillose-scaly and "purple drab", spuriously striate. Context thin, "purple-drab"; odor and taste none.

Lamellae adnate-subdecurrent, medium broad, close, sub-ventricose, white at first, then "vinaceous fawn," edges concolorous, even.

Stipe 26-30 mm long, 1.0-1.5 mm thick, dry, "purple drab" to more or less violaceous, glabrous, tubular, equal.

Spores 9-11 x 5-7 μ , 5-6-sided. at times indistinctly 7- and 8-sided, symmetrical, "vinaceous fawn" in mass. Basidia 22-30 x 9-10 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel. Subhymenium scarcely differentiated. Pilocystidia clavate, 38-42 x 8-10 μ , in more or less scattered clusters, cuticular hyphae repent. Pileus trama radial.

ENTOLOMA COKERI MURRILL

On soil in mixed woods, Chapel Hill, N.C., leg. W. C. Coker,
No. 1943, October 29, 1915

TYPE

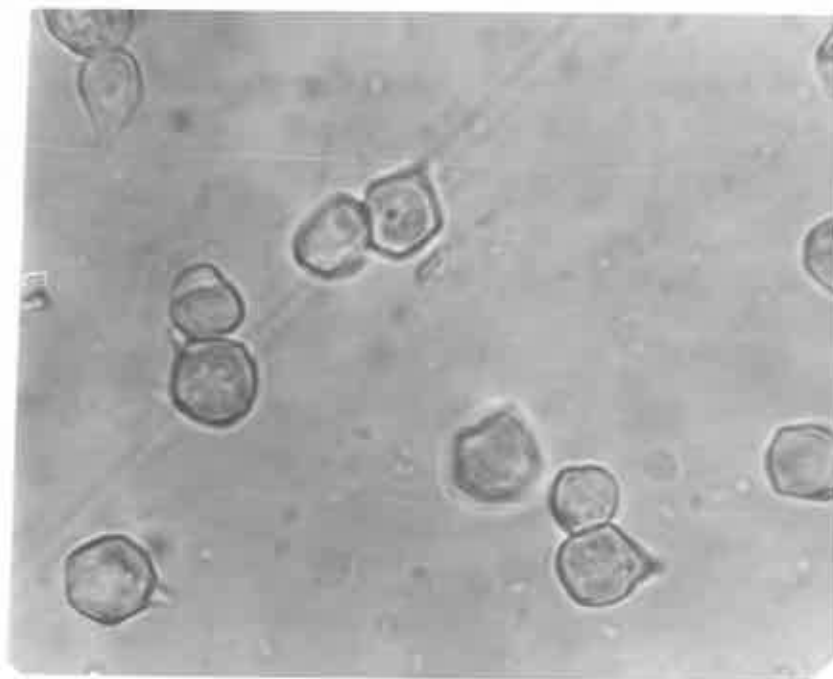
Spores 6.5-8.5 x 5.2-6.5 μ , globose, subglobose or ovoid, 5(6)-sided, at times obscurely 6-sided. Basidia 25-30 x 9-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-9 μ broad. Pileus trama radial. Cuticle of brownish hyphae bearing loosely tangled, more or less erect, colorless, narrow (1.5-3 μ), gelatinous hyphae, terminal elements cystidioid. Clamp connections and lactifers none.

ENTOLOMA COKERI MURRILL

On soil in mixed woods, Chapel Hill, N.C., leg. W. C. Coker,
No. 1943, October 29, 1915

TYPE

Spores 6.5-8.5 x 5.2-6.5 μ , globose, subglobose or ovoid, 5(6)-sided, at times obscurely 6-sided. Basidia 25-30 x 9-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-9 μ broad. Pileus trama radial. Cuticle of brownish hyphae bearing loosely tangled, more or less erect, colorless, narrow (1.5-3 μ), gelatinous hyphae, terminal elements cystidioid. Clamp connections and lactifers none.



Entoloma cokeri Murr.

Type

17669

ENTOLOMA COKERI Murr.

Pileus 6-8 cm broad, expanded nearly plane, slightly and broadly umbonate, near "deep olive-buff," disc darker, canescent, slightly virgate, margin rivulose, margin even (scarcely striate), lubricous to viscid, pellicle separable almost to disc. Context white, thick on disc, thin on margin; odor slight, taste farinaceous.

Lamellae narrowly emarginate, white then "light pinkish cinnamon," crowded, tapering either way, rather broad, edge serrate-eroded.

Stipe 10-11 cm x 10-15 mm, whitish, shining, fibrillose-striate, strict, dry, solid, equal or slightly tapering upward.

Spores 6.5-8(8.5) x 5.5-6.5(7) μ , 5(6)-sided, "orange cinnamon" in mass, subsphaeroid to ovoid. Gill trama of subparallel hyphae, 8-15 μ broad. Pileus trama radial. Cuticle as in 22214.

Smith (letter, April 3, 1947) thought it near Ent. lividum but spores are too small. The spore-size and the trichodermium indicate Ent. cokeri, which has white flesh and gills (as 17669).

17955

ENTOLOMA COKERI Murrill

Pileus 25-30 mm broad, convex, subumbonate, pellicle separable, viscid, grayish-brown, (not matched), disc darker, radiately silky or rivulose, not striate. Context thick on disc, thin on margin, white; odor mild, taste farinaceous.

Lamellae deeply emarginate, remote, attached by a line, white, finally "light pinkish cinnamon," not broad, close, edges even.

Stipe 1.5-3 cm x 5-8 mm, white, shining, tapering downward, lightly stuffed, dry.

Spores 6.5-8(8.5) x (5)5.5-6.5 μ , ovoid or subglobose, 5-sided. Basidia 25-28 x 6-8 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 4-8 μ broad. Subhymenium gelatinous. Pileus trama radial. Cuticle a narrow gelatinous zone; hypodermium brown.

Smith identified this as a small form of Ent. lividum, but it appears to be Ent. cokeri. Romagnesi (1956) says that in E. lividum, pileus is yellowish or whitish then livid brownish, more or less rugose, radiately fibrillose. Stipe 6-10 cm x 15-32 mm, whitish. Context white, odor and taste farinaceous. Lamellae yellowish then salmon, emarginate. Spores 8.5-10.5 x 7.2-8 μ . Pleurocystidia and cheilocystidia none. Cuticle filamentous. His description and illustrations (pl. 76) do not suggest 17955.

Pileus 4-8 cm broad, at first hemispheric-campanulate, then campanulate-convex and umbonate (at times acutely so), finally more or less expanded, grayish, near "deep olive buff," disc often darker, at first canescent, glabrescent, viscid, cuticle separable, radiately rugose, margin even. Context white, thick, on disc, thin on margin; odor and taste farinaceous.

Lamellae deeply emarginate to sinuate, crowded, broad, white, then pale flesh, edges serrate-eroded.

Stipe 7-10 cm x 9-12 mm, white appressed fibrillose-striate, firm and rather hard, base curved and pointed, solid, dry.

Spores 6.5-8.5 x 5.5-6.5 μ , globose, subglobose, to ovoid, 5(6)-sided, in mass: "orange cinnamon," Pleurocystidia and cheilocystidia none. Gill trama subparallel. Subhymenium a narrow, gelatinous zone. Cuticle a conspicuous gelatinous zone.

22001

ENTOLOMA COKERI Murr.

Spores (6.5)7-8(8.5) x (5.5)6-7 μ , 5-sided. Gill trama
a mediostrate; subhymenium gelatinous. Cuticle a narrow
gelatinous zone.



22001 - *Eutoloma Cokeri* Murr.

x 1700

Photo by T. H. Campbell

22214

ENTOLOMA COKERI Murr.

Photo

Macroscopic characters as in 21922 and 22001.

$6-8.5(9) \times (4.5) 5-6(7) \mu$,

Spores ~~5-9 x 4-5 (7) μ~~ 6-sided, at times more or less obscurely 5-6-sided. Basidia 30-35 x 7-9 (10) μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-9 μ broad. Pileus trama radial. Cuticle bearing a trichodermium of more or less erect, colorless, gelatinous hyphae, the terminal elements often cystidioid,—pilocystidia. Clamps occasional on the epicuticular hyphae; lactifers none.

This appears to agree with the type.

Eutima cokeri Murr.

No. 22214



Pils - x 1000

124



22214 - *Eutoloma Cokeri* Murrill

Pileus conic, then convex with a low, broad umbo, "dark olive-buff," umbo "light brownish olive," somewhat viscid, radiately appressed-fibrillose. Context white; odor and taste farinaceous (finally faintly bitter).

Lamellae emarginate, white, then flesh pink, close, broad, ventricose.

Stipe 4-7 cm long, 5-8 mm thick, white, glabrous, apex more or less pruinose, stuffed, equal above the more or less subbulbous base.

Spores 7-8 x 5-5.5 (6) μ , ovoid, with a rather conspicuously long apiculus, color in deposits: "cinnamon." Basidia 27-40 x 7-8 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-14 μ broad. Subhymenium gelatinous. Pileus trama radial. Cuticle a gelatinous zone. Clamp connections rare in the epicuticular hyphae. Lactifers none.



24534. *Eutoloma cokeri* Murr.

26287

ENTOLOMA COKERI

Pileus 2-4.5 cm broad, watery gray-brown, hygrophanous, disc dark and rugose, margin even. Context concolor; odor mild, taste farinaceous.

Lamellae emarginate, white, then pink, narrow, close.

Stipe 3.5-4.5 cm long, 3-6 mm thick, apex mealy elsewhere glabrous, solid, equal.

Spores 6.5-8 x 5.3-6.5 μ , subglobose or short-ellipsoid, 5-6-sided. Basidia 24-28 x 7-9 μ , 2-4-spored. Pleurocystidia, cheilocystidia, pilocystidia, caulocystidia none. Gill trama subparallel, hyphae 3-6 μ broad, flanked by a gelatinous subhymenium. Pileus trama radial. Cuticle of repent hyphae, gelatinous. Clamp connections none.

Strongly resembles the type of E. grayanum, which has spores 8.5-10 x 7-8 μ . In E. griseum the gills are grayish, spores 7.5-9 x 7-8 μ .

24534

ENTOLOMA COKERI Murr.

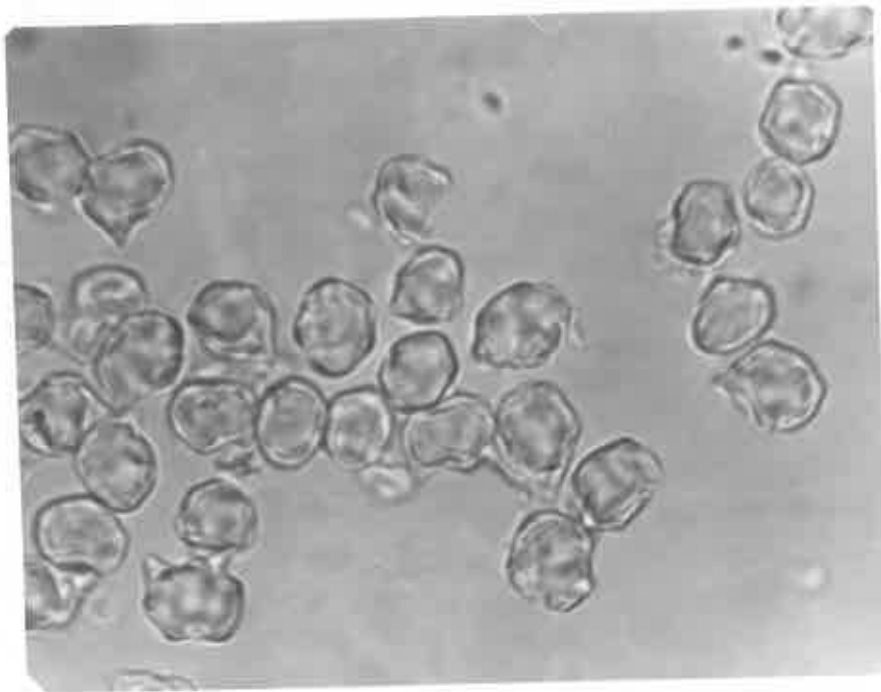
PHOTO

Pileus 3-5.5 cm broad, conic, then convex with a low, broad umbo, "dark olive-buff," umbo "light brownish olive," viscid, radiately appressed-fibrillose. Context white; odor and taste farinaceous (finally faintly bitter).

Lamellae emarginate, white, then flesh pink, close, broad, ventricose.

Stipe 4-7 cm long, 5-8 mm thick, glabrous, apex more or less pruinose, stuffed, equal above the more or less sub-bulbous base.

Spores 7-8 x 5-5.5 (6) μ , ovoid, with a rather conspicuously long apiculus, color in deposits: "cinnamon." Basidia 27-40 x 7-8 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-14 μ broad. Subhymenium gelatinous. Pileus trama radial. Cuticle a gelatinous zone. Clamp connections rare in the epicuticular hyphae. Lactifers none.



Entoloma commune Murr. - *Type* . X 1700

LEPTONIA CONICA (Murr.) Murr.

Mycologia 10:178. 1918

Leptoniella conica Murr., Mycologia 10:178. 1918.

Pileus 1.5 cm broad, 1 cm high, conic, not fully expanding, hygrophanous, umbrinous, fuliginous on drying, margin slightly paler, glabrous, slightly striate. Context thin, pallid; odor none, taste sweet-farinaceous.

Lamellae adnexed, pale-rose colored, subcrowded, slightly ventricose, edges concolorous.

Stipe 4-5 cm x 2-3 mm, concolorous, slightly tapering upward, glabrous, base white-mycelioid, solid or somewhat hollow.

Spores 10-12 x 5 μ , pale-rose colored.

The type of Leptonia conica could not be located (Jan. 1962). A color drawing was examined. It was collected by Murrill, in the N. Y. Bot. Garden, July 27, 1915.

LEPTONIA CONICA (Murr.) Murr.

Mycologia 10:178. 1918

Leptoniella conica Murr., Mycologia 10:178. 1918.

Pileus 1.5 cm broad, 1 cm high, conic, not fully expanding, hygrophanous, umbrinous, fuliginous on drying, margin slightly paler, glabrous, slightly striate. Context thin, pallid; odor none, taste sweet-farinaceous.

Lamellae adnexed, pale-rose colored, subcrowded, slightly ventricose, edges concolorous.

Stipe 4-5 cm x 2-3 mm, concolorous, slightly tapering upward, glabrous, base white-mycelioid, solid or somewhat hollow.

Spores 10-12 x 5 μ , pale-rose colored.

The type of Leptonia conica could not be located (Jan. 1962). A color drawing was examined. It was collected by Murrill, in the N. Y. Bot. Garden, July 27, 1915.

NOLANEA CONICA (Pk.) Sacc.

← Syll. Fung. 5:723. 1887

Agaricus (Nolanea) conica Pk., New York State Mus. Ann.
Rept. 24:66, 1872.

Pileus 8-20mm broad, conical, at length expanded,
with a minute umbo or papilla, hygrophanous, dull watery
cinnamon and striatulate when moist, pale grayish
cinnamon, silky shining and subzonate when dry. Context ^{submembranous;} ~~^~~
odor and taste mild
narrowly attached or
Lamellae [^] nearly free, bright flesh color, close, rather
narrow, terminating before the margin of the pileus.

⁴⁻⁶ Stipe ^{1-2 mm} 5cm long, ~~4mm~~ thick, brown with white mycelium
equal,
at the base, [^] straight, hollow.

⁽¹¹⁾
Spores 8-10 [^] x 6-7.5(8) μ , ovoid to subovoid, or short-
ellipsoid. 5-sided. Basidia (32) 35-42 x 7-10 μ , 2-4-spored.
Pleurocystidia and cheilocystidia none. Gill trama more or
less parallel, hyphae 5-9 μ broad. Pileus trama radial.
Cuticle repent, overlaid with a colorless, septate, loosely
tangled trichodermium, some terminal elements as clavate,
or subcapitate pilocystidia. Clamp connections and lactifers
none.

HABIT, HABITAT, AND DISTRIBUTION - On soil and wood,
among mosses, New York, ^{and} North Carolina, August.

MATERIAL STUDIED - NEW YORK: Peck (Type, Sandlake,
August); NORTH CAROLINA: Hesler 10736,

Observations - The ~~new~~ description of microscopic
characters above is based on ~~a~~ a study of the type.

See revision

NOLANEA CONICA (Pk.) Sacc.

Syll. Fung. 5:723. 1887

Agaricus conicus Pk., New York State Mus. Ann. Rept. 24:66. 1872.

Pileus 0.8-2 cm broad, conic, finally expanded, with a minute umbo or papilla, hygrophanous, dull-watery-cinnamon (wet), pale-grayish-cinnamon (dry), silky-shining, subzonate, striatulate when moist.

Lamellae nearly free, bright flesh-colored, narrow crowded.

Stipe 5 cm long, 1 mm thick, brown, base white-mycelioid, straight, hollow.

Spores 8-10 x 6-7.5(8) μ , subovoid, at times short-ellipsoid, 5-sided. Basidia (32)35-42 x 7-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama more or less parallel, hyphae 5-9 μ broad. Pileus trama radial. Cuticle repent, overlaid with a colorless, septate, loosely tangled trichodermium, some terminal elements clavate or subcapitate and distinctly cystidioid. Clamps connections and lactifers none.

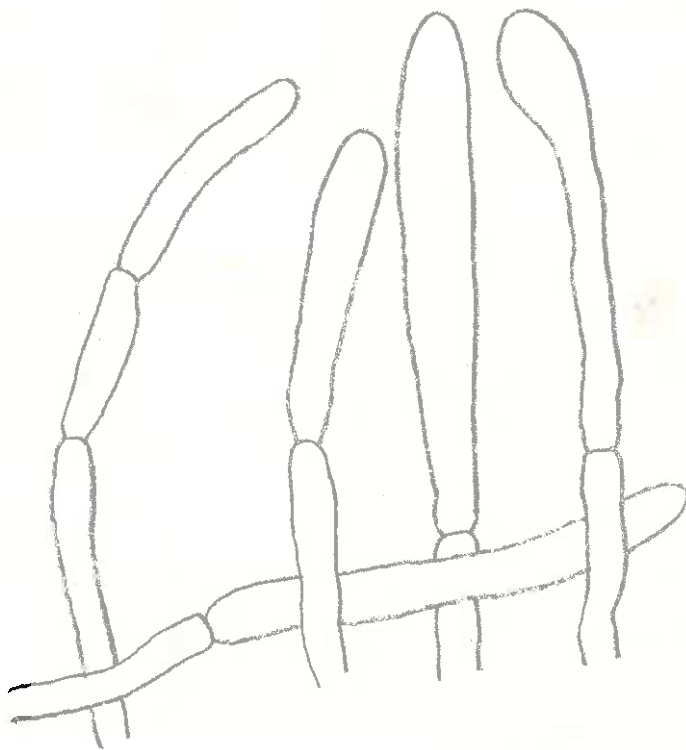
HABIT, HABITAT, AND DISTRIBUTION - On rotten wood and among mosses in swamps, Maine to Virginia.

MATERIAL STUDIED * NEW YORK: Peck, the type, Sandlake, August.

OBSERVATIONS - We have not collected this species in the Southeast, but since it is reported (Murrill, 1917) from Virginia it is included on the possibility of its discovery here.

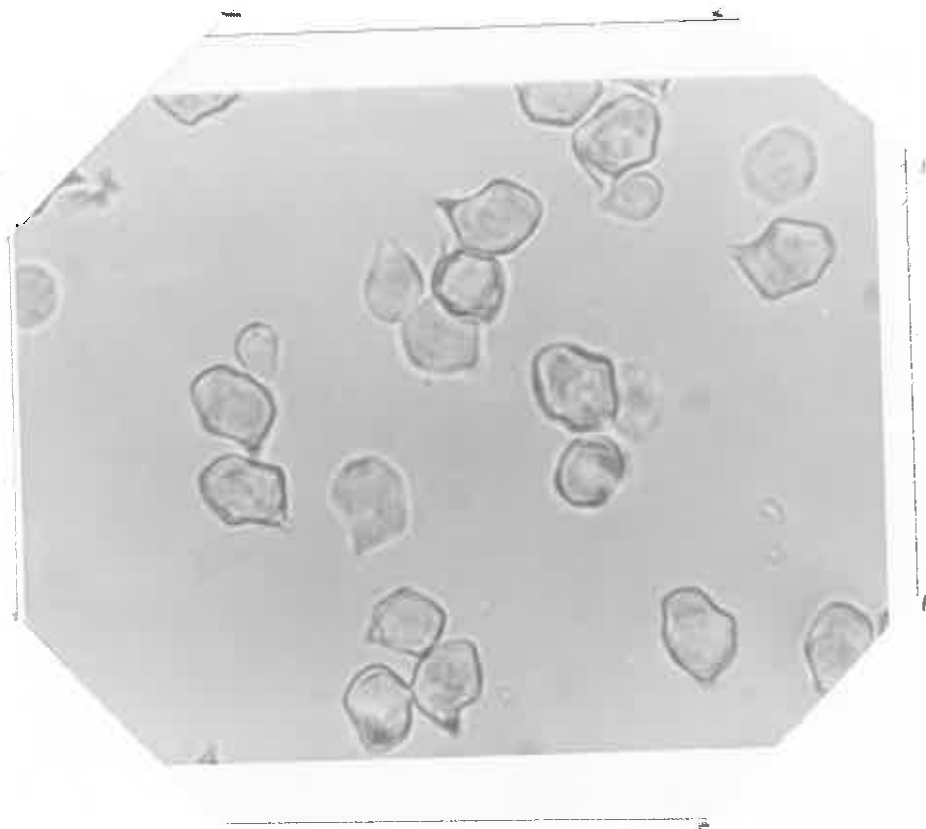
Nolanea conica (Pk.) Sacc.

Type



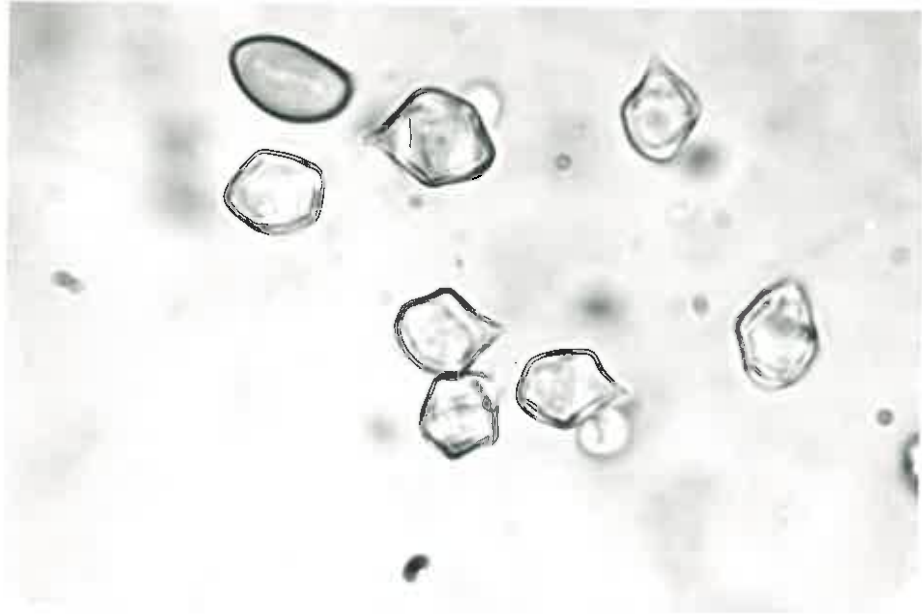
Pilo. $\times 1000$

79

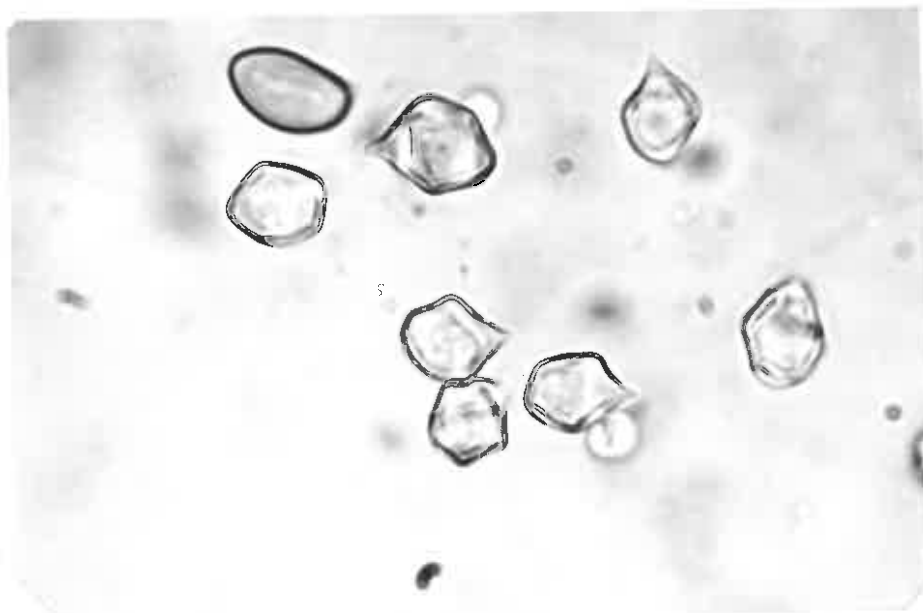


Nolanea conica (Pk.) Pacc. - Type
x 1700

Photo by T.H. Campbell



Nolanea conica (Pk.) Sacc. - *Fipe*
x 1800



Nolanea conica (Pk.) Sacc. - *Type*
X 1850

10736

NOLANEA CONICA (Pk.) Sacc.

Pileus 0.8-1.8 cm broad, conic, papillate, hygrophanous, subzonate, watery-cinnamon, paler when dry, margin striatulate when wet. Context thin; odor and taste mild.

Lamellae narrowly attached, narrow, medium close.

Stipe 4-6 cm long, 1-2 mm thick, brownish, equal, glabrous, base white-mycelioid.

Spores 9-11 x 7-8 μ , 5-sided, ovoid to ellipsoid. Basidia 28-34 x 7-9 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 3-6 μ broad. Pileus trama radial. Cuticle repent. Pilocystidia none. No clamps and no lactifers.

Rhodophyllus conico-umbonatus sp. nov.

22977

ENTOLOMA No. 22977

~~in the autumn~~ ~~sp. nov.~~

Type

Pileus 3-6 cm/ broad, conic, finally expanding plane or convex, at times margin upturned, prominently umbonate, near "olive buff" to olive-gray or grayish-brown (not well matched), disk often darker, radiately appressed-silky or fibrillose, hygrophanous, shining when dry, cuticle separable to disk, margin even. Context pallid or grayish-white, thin; odor slight, taste farinaceous, ~~astrigent~~.

Lamellae emarginate, close, broad, ventricose, at first pallid, finally "pinkish-cinnamon", alternating short ones, edges even.

Stipe ^{long,} 5-8 cm/ ^{thick,} 7-12 mm/, dingy gray-brown, with scattered fibrils, longitudinally striate, somewhat twisted, more or less compressed, splitting longitudinally, equal, hollow or lightly stuffed.

Spores 10-12 x 8-9 μ , 5-(6)-sided, color in deposits: "orange cinnamon". Basidia 34-41 x 9-11 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 8-20 (30) μ broad. ^{Subhymenium ~~glabrous~~ not distinctive.} Pileus trama radial. Cuticle repent, ^{dry,} with occasional repent to semi-erect, cylindric, pale fuscous pileocystidia. ^{connections} Clamp none. Lactifers in pileus trama.

E. inocybiforme ^{stipe is slender (5 mm.),} lacks any pileocystidia (pileus is glabrous; pileus striate to disc.) The two (No. 22977 & inocybiforme) do not resemble each other dried. R. versatilis is ^{metallic} ~~dark~~ olive-greenish; has large pl. & ch.

DI



22977 - ~~Exoloma umbonatum~~
R. conico-umbonatus type

Rhodophyllus conico-umbonatus sp. nov.
umbonatus sp. nov.

23570

~~ENTOMOMA~~ NO. 23570

Pileus 1.5-3 cm. broad, conic, expanding conic-campanulate and umbonate, dry, not hygrophanous, near "buffy brown", shining, appearing nearly glabrous, subsilky under lens, margin even. Context whitish, thin; odor and taste mild or slightly astringent.

Lamellae narrowly adnate, nearly free, close, narrow, grayish, then grayish-pink, many lamellulae, edges even.

Stipe 3-5.5 cm. x 5-8 mm., dingy brown, paler above, with scattered fibrils, longt. striate, tubular, equal or more often ^{slightly} ~~attenuated~~ tapering upward.

Spores ^{9.5-11.5} ~~9-11~~ x 7.5-9 μ , ovoid or short-ellipsoid, 5-sided, in deposit: "pinkish cinnamon". Basidia 38-54 x 10-12 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 7-11 μ broad. ^{Subhymenium not distinctive.} Pileus trama radial. Cuticle ^{brown}, ~~repent~~, with scattered small clusters of narrow (5-7 μ) ~~more~~ or less erect hyphae, ~~the terminal elements at times slightly~~ ^{scattered, clavate.} ~~cystidioid. No true Pilocystidia.~~ Clamp connections and ~~lactifers~~ none. ^{lactifers in the pileus trama.}

E. jubatum: cap mouse, or brownish gray, tomentose-fibrillose; spores 9-10.5 x 5.5-6 μ . E. 22977: ^{hygrophanous,} gills ^{broad,} stipe larger - otherwise quite similar. E. murinum: is striate (dried), gills white, stipe white - otherwise similar.



23570 - ~~Eutoloma umbonatum~~
R. conico-umbonatus



23570 - ~~Ectoloma umbonatum~~ sp. nov.
R. conico-umbonatus

LEPTONIA CORVINA (Kühner) Orton

Pileus at first almost black, although often tending toward blue-violet, tomentose-fibrillose, remaining dark and downy fibrillöse, not striate or only slightly so. Context not of mealy taste.

Lamellae not decurrent, neither blue nor violet in youth, edges concolorous, shining granulations in the hyphae of the lamellae so abundant as to render a mount milky.

Stipe much lighter (than cap), steel-gray or blue-gray, becoming a good bit paler in age until it becomes almost whitish, tomentose; almost grainy-flaky, especially above.

Spores 8.5-12.2 x 6.5-7.2 μ . Cheilocystidia normally numerous (see K-R key).

K. & R. (p.206) list Lange's L. lampropus Fr. (Fig. 76c) as a doubtful synonym. If this is so, then corvina has gills white at first; stipe dark indigo-blue (about the shade of the pileus), with nothing said about the stipe becoming paler to almost whitish; spores 9.5-11.5 x 6.5-7 μ . R. has found a species, near corvina of Kühner, which approached L. nefrens in its olive coloration (Bres. 579), with spores 9-10 x 6.5-7.2 μ , with large marginal hairs (cheilocystidia ?), 40-85 x 8.5-13.5 μ . But, its cap color and scarcely paling stipe distinguish it from corvina.

LEPTONIA CARVINA (Kühn,) Orton

Orton No. 1612

from Royal Botanic Garden, Edinburgh, coll. P. D. Orton,
No. 1612, Aug. 30, 1958.

Spores 8.5-12 x (5.5) 6-7.5 μ , 6-7-sided. Basidia
26-30 x 7-10 μ , 4-spored. Pleurocystidia none; cheilocystidia
35-48 x 5-8 μ , fusoid to clavate and more or less appendiculate,
few. Gill trama subparallel, hyphae 5-9 μ broad. Pileus trama
radial. Cuticle of brown, repent hyphae, the terminal elements
fuscous, more or less clavate, 11-16 μ broad. Clamp connec-
tions none.

LEPTONIA CARVINA (Kühn,) Orton

Orton No. 1612

from Royal Botanic Garden, Edinburgh, coll. P. D. Orton,
No. 1612, Aug. 30, 1958.

Spores 8.5-12 x (5.5) 6-7.5 μ , 6-7-sided. Basidia
26-30 x 7-10 μ , 4-spored. Pleurocystidia none; cheilocystidia
35-48 x 5-8 μ , fusoid to clavate and more or less appendiculate,
few. Gill trama subparallel, hyphae 5-9 μ broad. Pileus trama
radial. Cuticle of brown, repent hyphae, the terminal elements
fuscous, more or less clavate, 11-16 μ broad. Clamp connec-
tions none.

LEPTONIA CORVINA (Kuhner) Orton

From Kew; coll. R. W. G. Dennis, No. 60, Isle of Rhum, Oct. 1, 1961.

Spores 9.5-12 x 6-7.5 μ , 5-6-sided. Basidia 32-41 x 8-10 μ , 4(2)-spored. Pleurocystidia none; cheilocystidia 37-63 x 5-10 μ (up to 17 μ broad when incipiently forked), clavate, cylindric, more rarely subcapitate or apex with incipient forking, numerous, sometimes appearing more or less agglutinated. Gill trama subparallel, hyphae 5-10 μ broad. Pileus trama of radially-disposed hyphae. Cuticle of repent hyphae, bearing a dense turf of repent or semi-erect, brown or fuscous, clavate pilocystidia, 10-16 (25) μ broad. Clamp connections none.

Cf. L. aethiops.

LEPTONIA CORVINA (Kuhner) Orton

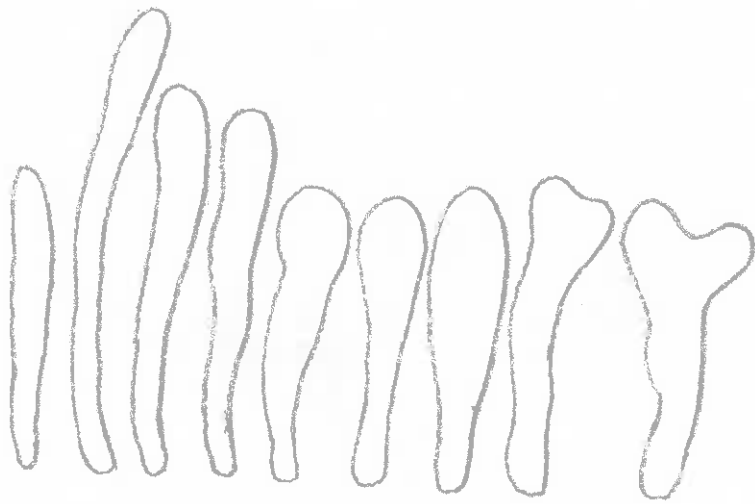
From Kew; coll. R. W. G. Dennis, No. 60, Isle of Rhum, Oct. 1, 1961.

Spores 9.5-12 x 6-7.5 μ , 5-6-sided. Basidia 32-41 x 8-10 μ , 4(2)-spored. Pleurocystidia none; cheilocystidia 37-63 x 5-10 μ (up to 17 μ broad when incipiently forked), clavate, cylindric, more rarely subcapitate or apex with incipient forking, numerous, sometimes appearing more or less agglutinated. Gill trama subparallel, hyphae 5-10 μ broad. Pileus trama of radially-disposed hyphae. Cuticle of repent hyphae, bearing a dense turf of repent or semi-erect, brown or fuscous, clavate pilocystidia, 10-16 (25) μ broad. Clamp connections none.

Cf. L. aethiops.

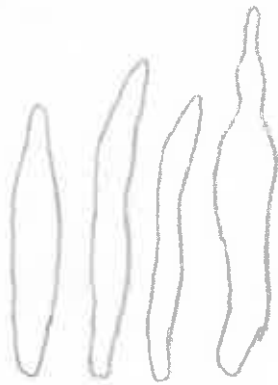
Leptonia corvina (Kühner) Orton

from Kew, Dennis No. 68, Isle of Rhum, Oct 1, 1961



ch - x 1000

Leptonia corvina (Kühn.) Orlon
Orlon No. 1612



Ch - x 1000

LEPTONIA CORVINA (Kuhner) Orton
from Kew; coll. Dennis, Aug. 10, 1956, Surrey.

This is identical, microscopically, with Dennis'
No. 60, from Isle of Rhum.

LEPTONIA CORVINA (Kuhner) Orton
from Kew; coll. Dennis, Aug. 10, 1956, Surrey.

This is identical, microscopically, with Dennis'
No. 60, from Isle of Rhum.

LEPTONIA CUBENSIS (Murr.)

+Eccilia cubensis Murr., Mycologia 3:273. 1911.

(See descr. N. A. F. 10:85. 1917)

The type consists of a part of one small sporophore,
which is quite moldy. No effort was made to section the cap.

Type coll. near Nerradura, Cuba, Oct. 14,
1906, Earle 554.

21907

cuboides
LEPTONIA ~~QUADRATA~~ sp. nov.

Type

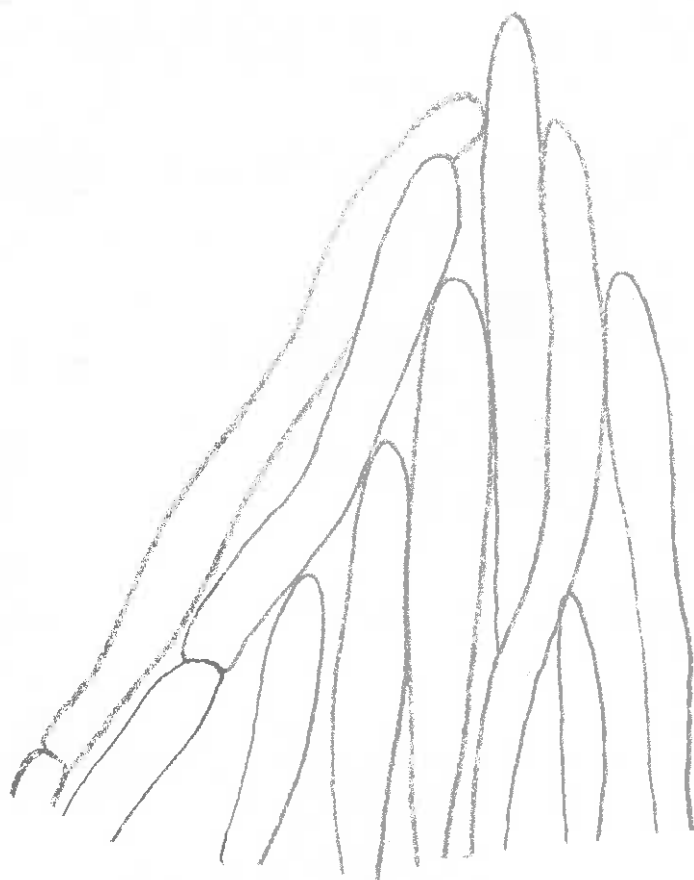
Pileus 1.5-2 cm broad, "Sayal brown" to "snuff brown," fibrillose to scaly, umbilicate, umbilicus scaly, margin even. Context pale; odor and taste mild.

Lamellae short-decurrent, broad, subdistant, white then flesh, edges concolorous.

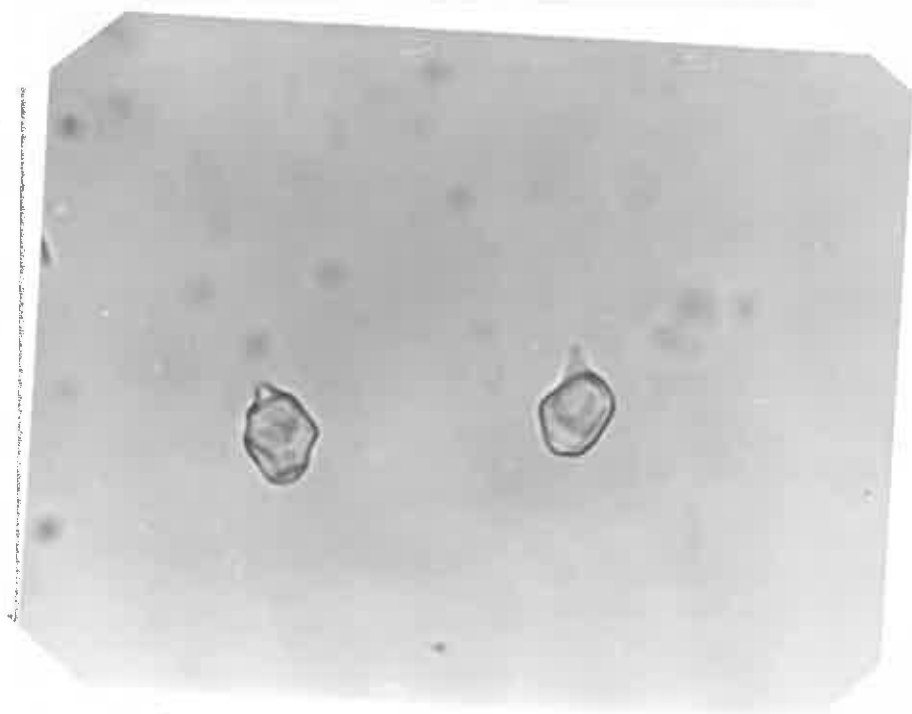
Stipe 5-8 cm x 2-3 mm, glabrous, brownish.

Spores 8-12 x 8-10 μ , 4-sided, more rarely 5-sided. Basidia 40-47 x 10-13 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel. Pileus trama of radial hyphae. Cuticle repent, with pyramidal tufts of fuscous pilocystidia, - the scales. Clamp connections and lactifers none.

A. cuboidens
Septoria quadrata ^{plus} sp. nov.
No. 21907



Article - scale - $\times 1000$



Rhodophyllus
Caudopus cyanus Murr. - Type

x 1400

= *Lazulina*?

LEPTONIA CYANULA sensu K. & R.

from Herbar Henri Romagnesi, No. 287, Coye-la-Forêt, Oise,
Sept. 3, 1946.

Spores 11-16 x 8-9.5 μ , 6-7-sided, at times (especially larger spores) obscurely 7-9-sided, symmetrical. Basidia 22-25 x 8-9 μ . Pleurocystidia and cheilocystidia none. Pileus trama radial. Cuticle repent; no pilocystidia found.

(The material sent by Romagnesi was too meagre for entirely satisfactory study. It was entirely used up in making one mount.)

Kühner and Romagnesi say that Bresadola's Nolanea caelestina Fr. (Tab. 590, 3) represents their L. cyanula. They describe it (in their Key) as having a steel-gray-blue or bluish stipe, cap striate to disc, gray-violet, or blue-black on disc or striae. Lamellae broad, ventricose, distant, edges concolor. Spores 11.5-14 x 7.2-9 μ . On mosses and in humid places. Bresadola gives gills white then flesh, edges fuscidulous and subfimbriate, spores 10-12 x 6-7 μ .

Cotton (1960:182) says Fange's cyanula = lazulina.

LEPTONIA DAVISIANA Pk,

New York State Mus. Bull. 157:49. 1912.

Leptoniella davisiana (Pk.) Murr., N. A. Flora 10:92. 1917.

Illustration:

Pileus 1-2.5 cm broad, convex becoming plane or broadly depressed, blackish-brown, glabrous but slightly squamulose in the center, often widely striate. Context thin, submembranous.

Lamellae adnexed, white then pinkish, close, subventricose, medium broad, thin, edges concolor.

Stipe 1.5-3 cm x 1-2 mm, concolorous, glabrous, stuffed or hollow, equal.

Spores 10-13 x 7-9 μ , 5-7-sided, occasionally obscurely 5-6-sided. Basidia 32-38 x 9-10 μ . Pleurocystidia and cheilocystidia none. Gill trama subparallel. Pileus trama radial (appearing cellular in tangential sections). Cuticle repent, with scattered or clustered colorless slender hyphae, the terminal elements as pilocystidia, acute or sub-acute, 60-76 x 2-3.5 μ . Clamp connections and lactifers none.

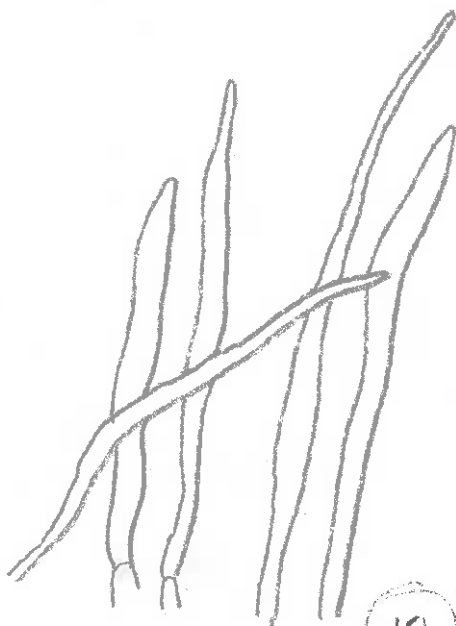
Habit, Habitat, and Distribution - On a lawn, in short grass, Massachusetts, August.

Material Studied - MASSACHUSETTS: Peck, the type, collected by S. Davis, Brookline, August 2-3, 1911.

Observations - The description of microscopic characters above is based on a study of the type. Peck states that it differs from L. abnormis in its smaller size, close, adnexed lamellae, squamulose disc, larger spores, and its dark-colored stipe.

Leptonia davisiana PK.

Type



(12)

Hyphae on pileus surface

x 1000



Leptonia darisiana OK. — Type

x 1400

LEPTONIA DAVISII (Pk.) comb. nov.

Clitopilus davisii Pk., Bull. Torrey Club 36:153. 1909.

Entoloma davisii (Pk.) Murr., ~~N. A.~~ ^{North Amer.} Flora 10:120. 1917.

Illustration:

Pileus 3-4 cm broad, convex, becoming nearly plane, subumbilicate when dry, glabrous, creamy-white or buff. Context thin, white; odor and taste farinaceous.

Lamellae adnate or slightly decurrent, white, becoming flesh-colored, narrow, crowded, thin.

Stipe 5-7 cm x 4-6 mm, white or whitish, in age brown or brownish, subbulbous, base white mycelioid, shining, solid or stuffed, equal or slightly tapering upward.

Spores 8-10 x (6) 7-8.5 μ , ellipsoid to subglobose, 5-6-sided. Basidia 24-33 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-7 μ broad. Cuticle of repent hyphae. Clamp connections and lactifers none.

Habit, Habitat, and Distribution - On soil, in woods, Massachusetts, and the mountains of North Carolina, September.

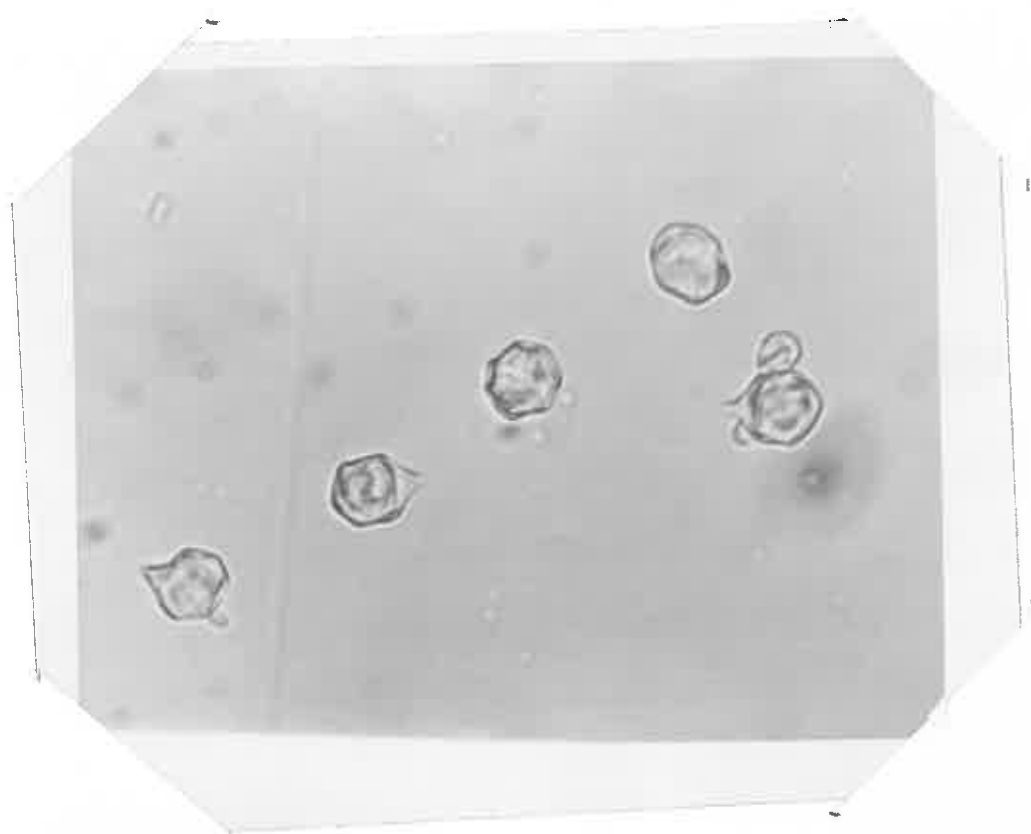
Material Studied - MASSACHUSETTS: Peck's type, of Clitopilus davisii, collected by S. Davis, Stow, Sept. 3, 1908.

Observations - The description of the microscopic characters above is based on a study of the type. The disc is depressed, and the stipes are about 3-6 mm thick; thus it is regarded here as Leptonia.



Eutoloma davisii (PK.) Murr. - Type
(= *Clitopilus davisii* PK.)

x



Eutoloma Davisii (PK.) Murr. - Type

X 1700

Photo by T.H. Campbell

NOLANEA DELICATULA (Pk.) Sacc.

Syll. Fung. 5:723. 1887

Agaricus delicatulus Pk., N. Y. State Mus. Ann. Rept. 24:66. 1872

Pileus 12 mm. broad, convex, becoming expanded, hygrophanous, pinkish-white, silky when dry, striatulate when moist. Context submembranous, fragile.

Lamellae slightly attached, white then flesh-colored, rather broad, ventricose, subdistant.

Stipe 5-7.5 cm. x 1 mm., white, subpellucid, smooth, hollow.

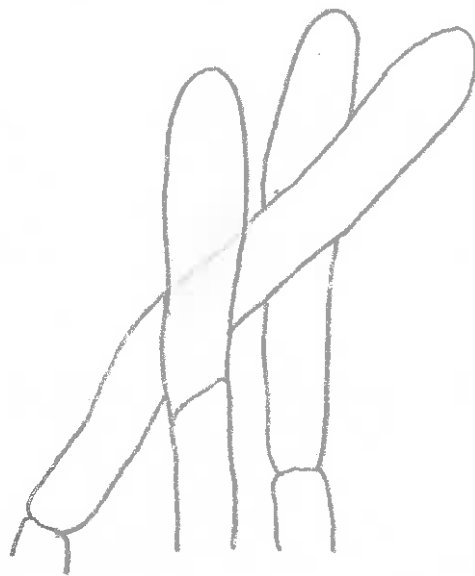
Spores 10-13 x 7-8 μ , 6-8-sided, often indistinctly so and subnodulose, ~~more or less symmetrical.~~ Basidia 28-37 x 7-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama undulating subparallel, hyphae 5-8 μ broad. Pileus trama radial. Cuticle repent, with scattered small tufts of colorless pilocystidia. Clamps ^{connections} and lactifers none.

Habit, habitat, and distribution. - In sphagnum swamps, New York and Massachusetts.

Material studied. - NEW YORK: Peck, the type, Sandlake, August.

Nolanea delicatula (Pk.) Sacc.

Type



Pilo - x 1000

Rhodophyllus delicatus sp. nov.

~~*pusilla*~~ sp. nov.

10411

NOLANEA NO. 10411

Pileus 8-16 mm, broad, campanulate, umbonate, grayish drab, silky-shining, not hygrophanous, margin even. Context whitish, very thin; odor and taste mild.

Lamellae narrowly adnate, seceding, white then flesh-pink, ventricose, broad (center, about 5 mm), close, edges fimbriate.

Stipe 3-5 ^{long,} cm, ^{thick,} 1 mm, equal, solid, livid color, whitish fibrillose, base white mycelioid.

Spore 9-11 x 6-8 μ , 4-5-sided, often irregularly 4-sided, ovoid to ellipsoid. Basidia 30-36 x 8-10 μ , 2-4-spored.

Pleurocystidia none; cheilocystidia 32-47 x 4-8 μ , cylindric, clavate or obclavate ^{to} flask-shaped. Gill trama subparallel, hyphae 7-12 μ broad. Pileus trama radial. Cuticle repent.

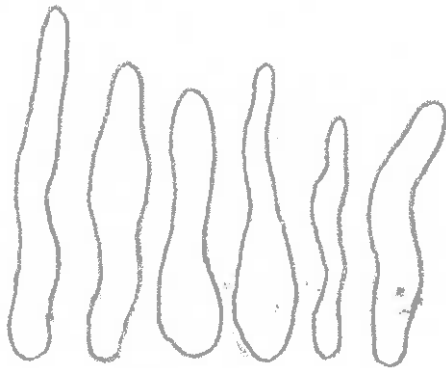
^{connections}
Lactifers and clamps none.

N. minuta Karst. is slightly umbilicate, minutely striate ~~to center~~ almost to center.

~~Nolanea No. 10411~~

pusilla R. *delicatus*

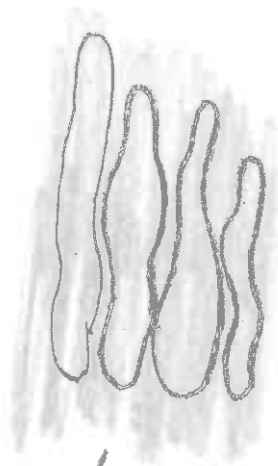
Type



Ch - x 1000

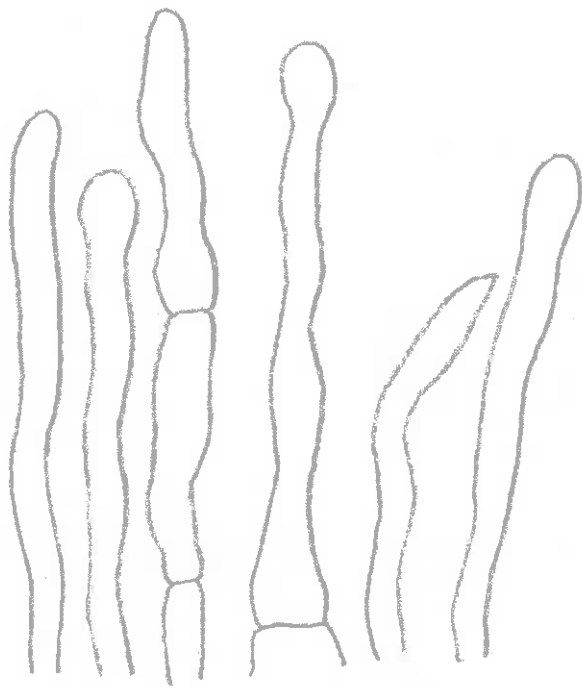
10411

R. delicatus

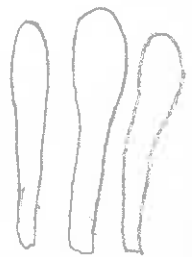


ch

Leptonia (*Claudopus*) ~~*lyngbyoides*~~ ~~*depluensis*~~ *depluensis*
No. 23069



Pilo - x 1000
(Pale fuscous)



Caulo - x 1000

NOLANEA DIMINUTIVA (Pk.) comb. nov.

Entoloma diminutivum Pk., Bull. Torrey Bot. Club 34:99. 1907.

Pileus 1.3-3 cm. broad, convex, becoming nearly plane, umbonate, hygrophanous, chestnut-brown or blackish when young or wet, pale and shining when dry, the umbo darker than elsewhere, margin at first inrolled, striatulate. Context thin, fragile; odor farinaceous.

Lamellae slightly adnexed, white, becoming pink, narrow, subcrowded, subventricose, thin.

Stipe 1.3-3 cm. x 1-2 mm., white or whitish, glabrous, shining, equal or slightly tapering upward.

Spores 8-10 x 7-8 μ , 5-sided, more rarely 6-sided. Basidia 30-40 x 8-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-7 μ broad. Pileus trama radial. Cuticle of repent hyphae; the surface a narrow zone of colorless, subgelatinous hyphae, a few more or less erect. Clamp connections and lactifers none.

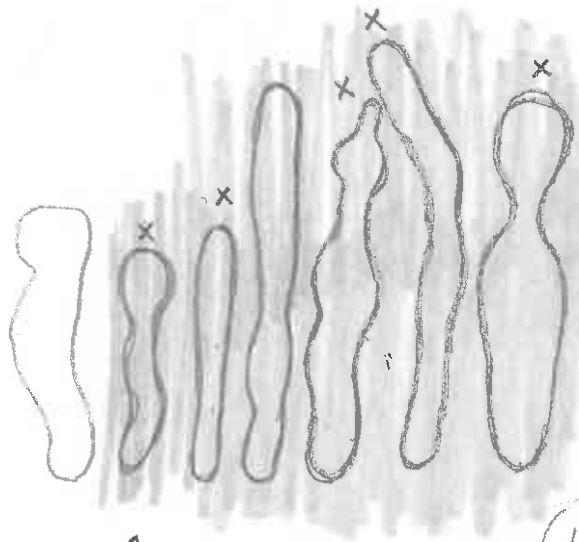
Habit, habitat, and distribution. - On soil under trees, Massachusetts, October.

Material studied. - MASSACHUSETTS: Peck's type, collected by Simon Davis, Stow, Oct. 7, 1906.

Observations. - The description of the microscopic characters above is based on a study of the type.

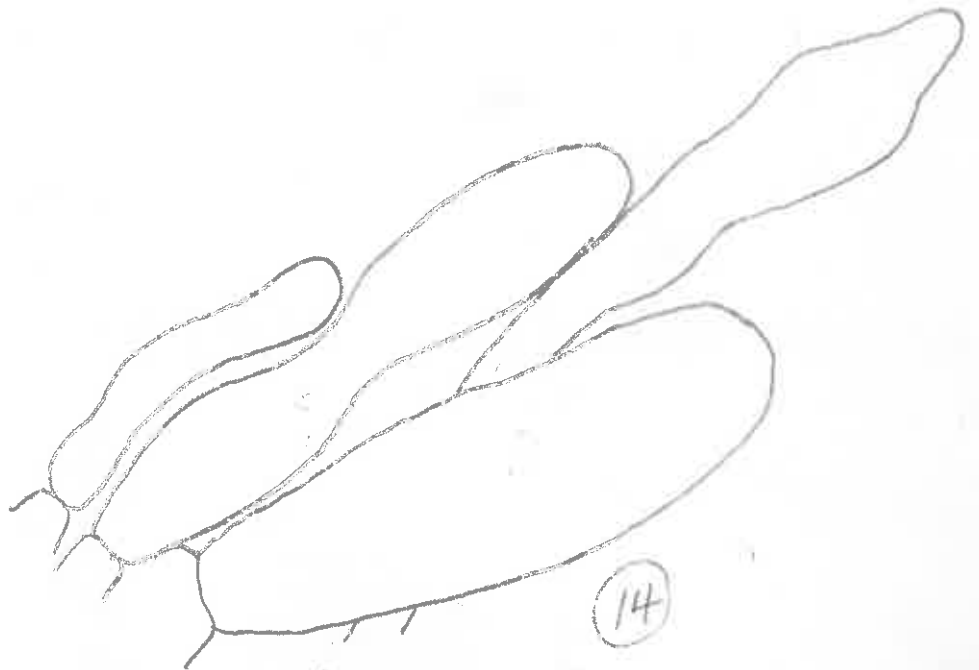
Peck (1907) distinguishes it from E. murinum by its odor, color, and hygrophanous character, and from E. perenne Fr. to which it is related, by its umbonate and darker colored pileus, its white stipe, and its larger spores.

Leptonia domestica Murr.
type



Ch - X 1000

(13)



Pilocyphidia - X 1000

(14)

59



Septoria domestica Murr. - Type

X 2000

earlei

	<u>Name Used</u>
Eccilia earlei Murr., Mycol. 3:274. 1911.	luteifolium
(Pleuropus earlei Murr., Mycol. 3:280. 1911.	murrillii
(Clitopilus earlei Murr., Mycol. 4:332. 1912.	murrillii

ENTOLOMA EARLEI Murr.

North Amer. Flora 10:119. 1917

Pileus 5 cm. broad, convex, irregular, hygrophanous, ochraceous, paler when dry, glabrous, margin irregular, thin, even. Context firm, pallid; taste mild.

Lamellae adnexed, pallid, broad, some ventricose, crowded, uneven, heterophyllous.

Stipe $\frac{1}{4}$ cm. x 8-12 mm., pallid, apex pruinose, elsewhere glabrous, somewhat flattened, hollow.

Spores 10-12 x 7-8 μ , 5-6-sided. Basidia 34-53 x 10-12 μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 4-10 μ broad. Pileus trama radial. Cuticle repent, a few surface hyphae somewhat uplifted. Clamps and lactifers none.

Habit, habitat, and distribution. - In rather dry woods, New York, August.

Material studied. - NEW YORK: Earle 1915, type, from New York Botanical Garden, Aug. 23, 1903.



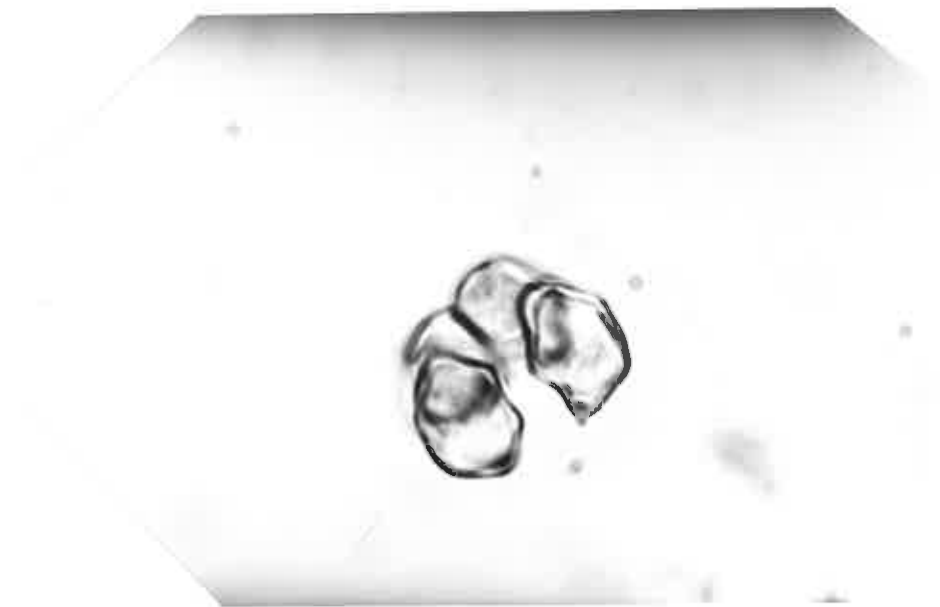
Leptonia carlei Muvor. — Type
x 1600



156
Entoloma earlei Murr. - Type

x 1700

See next page



Entoloma earlei Murr. - Type

x 1700



Eccilia carlei Muvall - Type

x 1700

(= *E. luteifolia* nom. nov.)

NOLANEA EARLEI Murr.

N.A. Flora 10:97. 1917

Pileus reaching 3 cm. broad, conic, then broadly convex or nearly plane, somewhat umbonate, dry, subsilky, cinereous becoming paler with age, margin pallid, not striate. Context thin, pallid; taste mild.

Lamellae sinuate, pallid to pinkish, subcrowded, ventricose.

Stipe 8 cm. x 3 mm., subconcolorous, equal, silky, shining, base white-mycelioid, solid.

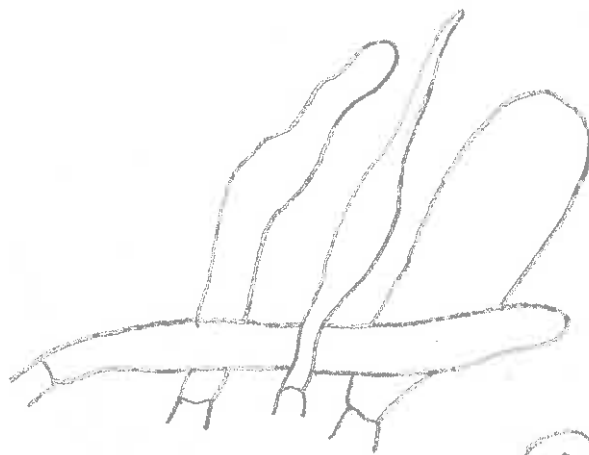
Spores 8-10 x 7-8 μ , short-ellipsoid to subglobose, 5-sided, at times obscurely 6-sided, ~~symmetrical~~. Basidia 27-33 x 9-11 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel. Pileus trama radial. Cuticle repent, with surface hyphae colorless, repent or erect, the terminal elements as ~~philocystidia~~ ^{philocystidia}, ~~x~~ clavate, fusoid, or irregular. Clamp connections and lactifers none.

Habit, habitat, and distribution. - On soil, in mixed woods, New York, July.

Material studied. - NEW YORK: F. S. Earle 769, the type, from New York Botanical Garden, July 30, 1902.

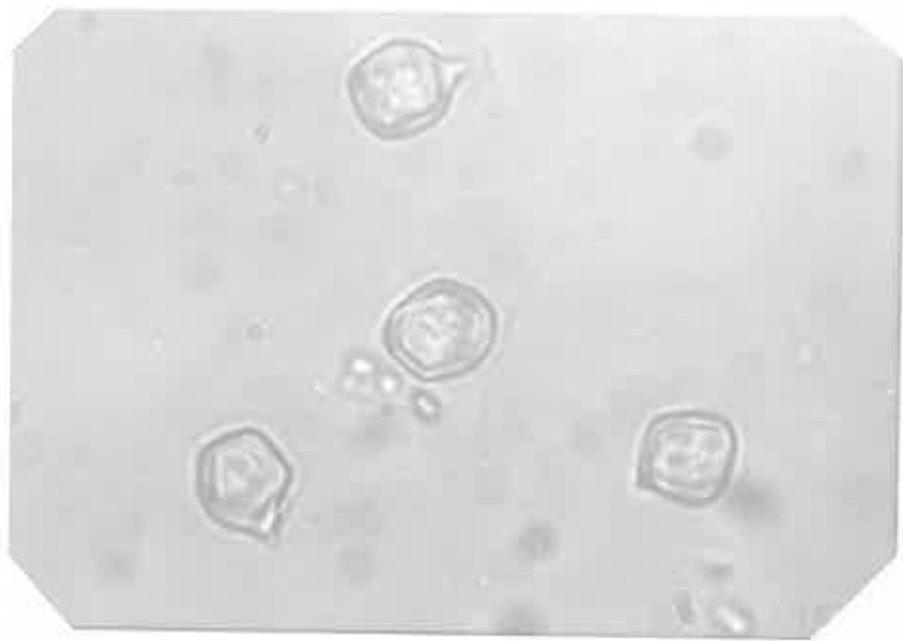
Nolanea earleii Murr.

Type



Pilocyptidia - x 1000

(82)



Nollansea earlei Murr. - Type

X 1700

PLEUROPUS EARLEI Murr.

Type

On soil, in banana field, Santiago de las Vegas, Cuba, F.S.
Earle 31, May 16, 1904. Borrowed from N.Y. Bot. Garden.

Spores 7.5-9 x 5.5-6 μ , 5-6(7)-sided. Basidia 23-28 x
7-8(9) μ , 4-spored. Pleurocystidia and cheilocystidia none.
Gill trama subparallel, hyphae 2-4 μ broad. Pileus trama
radial. Cuticle of repent hyphae; no erect hyphae or pilocystidia.
Clamp connections none.

This is a Leptonia.

PLEUROPUS EARLEI Murr.

Type

On soil, in banana field, Santiago de las Vegas, Cuba, F.S.
Earle 31, May 16, 1904. Borrowed from N.Y. Bot. Garden.

Spores 7.5-9 x 5.5-6 μ , 5-6(7)-sided. Basidia 23-28 x 7-8(9) μ , 4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 2-4 μ broad. Pileus trama radial. Cuticle of repent hyphae; no erect hyphae or pilocystidia. Clamp connections none.

This is a Leptonia.

LEPTONIA EDULIS Pk.

Bull. Torrey Club 22:201. 1895/

Leptoniella edulis (Pk.) Murr., North Amer. Flora 10:93. 1917.

Illustration:

Pileus 1-3.5 cm broad, convex or centrally depressed, with or without an umbo, dark-gray, velvety. Context thin; taste nutty.

Lamellae adnexed, at first white or light-drab, becoming flesh-colored, rather broad, subventricose, moderately close.

Stipe 2.5-3.5 cm x 1-2 mm, concolorous, often with a white, abundant mycelioid tomentum at the base, hollow.

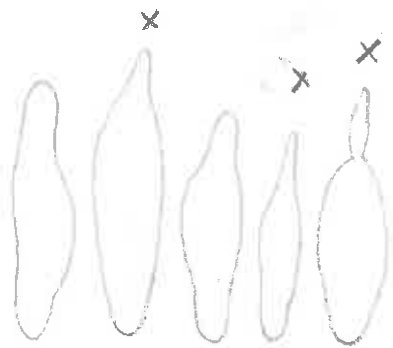
Spores 8-10 x 7-8 μ , globose, 5-sided, occasionally 6-sided, angles often more or less obscure. Basidia 30-37 x 8-9 μ , 2-4-spored. Pleurocystidia 28-37 x 5-10 μ , ventricose or clavate, at times appendiculate, scattered, inconspicuous; cheilocystidia 31-34 x 6-7 μ , subventricose to subcylindric, few. Gill trama subparallel. Pileus trama radial (appearing cellular in tangential sections). Cuticle repent. Clamp connections and lactifers, none.

Habit, Habitat, and Distribution - Among grass and weeds, California, January.

Material Studied - CALIFORNIA: Peck 826, type (NYS), from Pasadena, January 10, 1895, collected by A. J. McClatchie.

Observations - Although Peck says the pileus surface is velvety, sections of both young and mature caps failed to show any epicuticular structures which might comprise the velvet. The description of microscopic characters above is based on a study of the type.

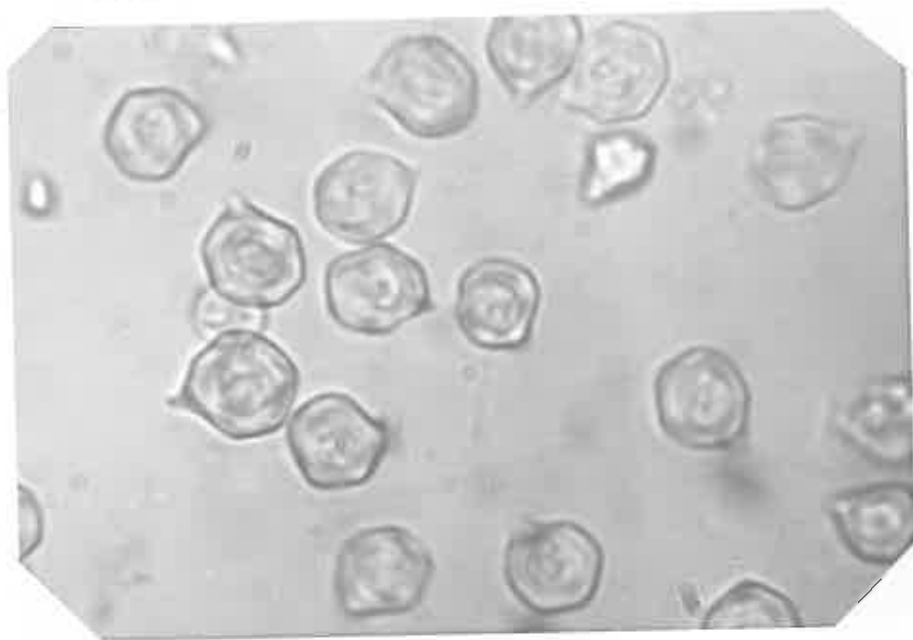
Septoria edulis PK
Type



Pl. x 1000 ⁽¹⁵⁾



Ch. x 1000 ⁽¹⁶⁾



Leptonia edulis PK. - Type

x 1700

entoloma

Name
Used

Clitopilus entoloma Murr., Lloydia 8:290. 1945.

amplifolium

Leptonia entoloma (Murr.)

No. 21118 (*Clitopilus* - part of Type)



Cuticle - hyphal elements - $\times 1000$

LEPTONIA EUCHROA

Bas, Sept. 29, 1954, Prov. Noord Holland, on Alnus stump,
leg. Swanenburg, det. Bas.

(Material appeared in poor condition in section.)

Spores 10-11 x 7 μ , 6-7-sided.

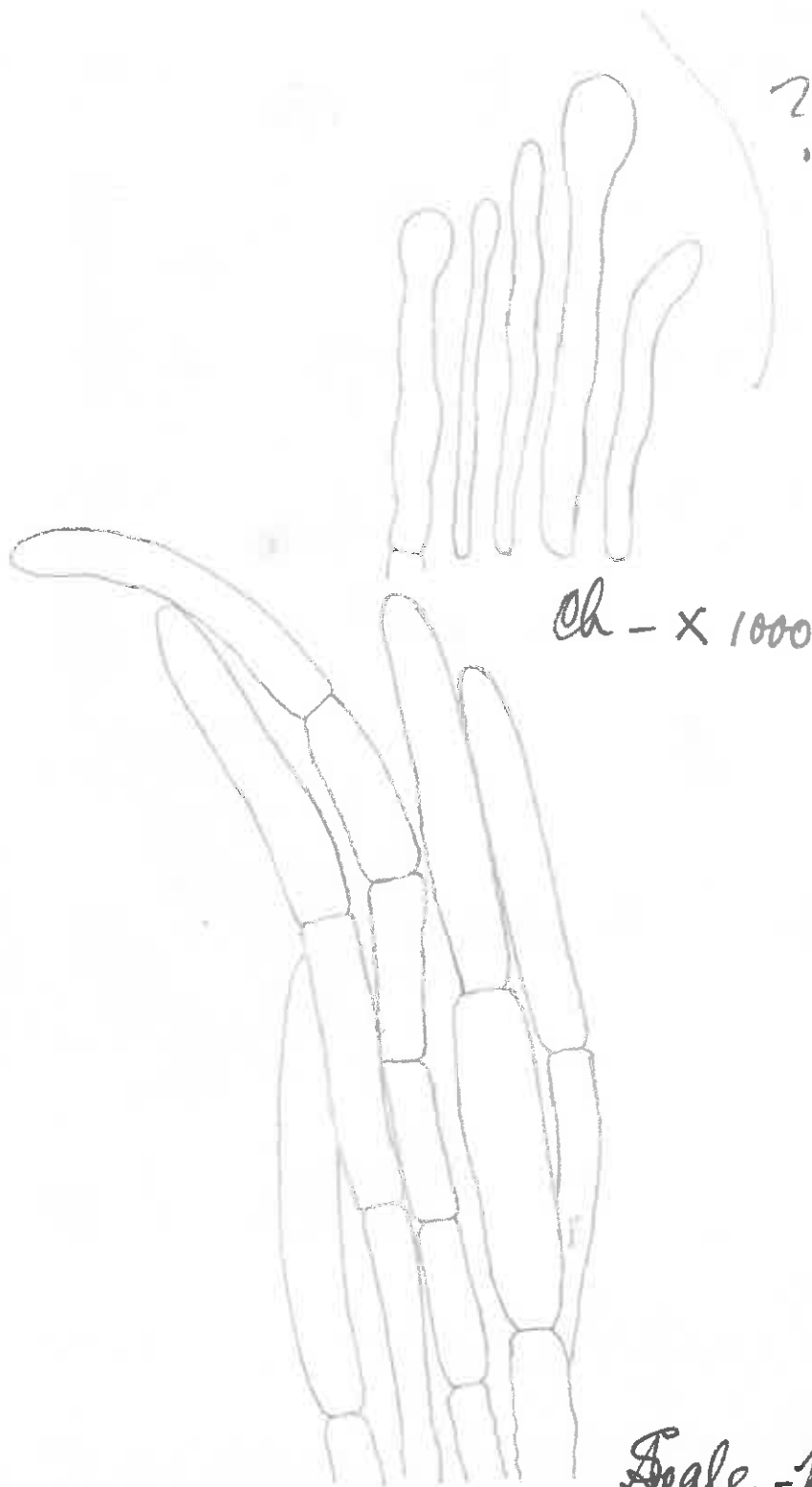
LEPTONIA ~~EUCHROA~~ (Fr.) Kummer

Collection from Mus. Botan. Stockholm, Uppland, July 29, 1889.
H. Kugelberg.

Spores 9-11 x 6-7.5 μ , 6-sided, at times obscurely 5-6-7-sided. Basidia 41-58 x 9-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 42-66 x 3-9 μ , slender-cylindric to cylindric-subcapitate, colorless in dried material. Gill trama subparallel, hyphae 5-10 μ broad. Pileus trama radial. Cuticle repent with a conspicuous trichodermium composed of individuals or bundles of septate, pale fuscous hyphae of uniform diameter, which may be granulated, and which may be regarded as "septate pilocystidia". Clamp none. Lactifers present in the pileus trama.

Septonia euchroa (Fr.) Kummer

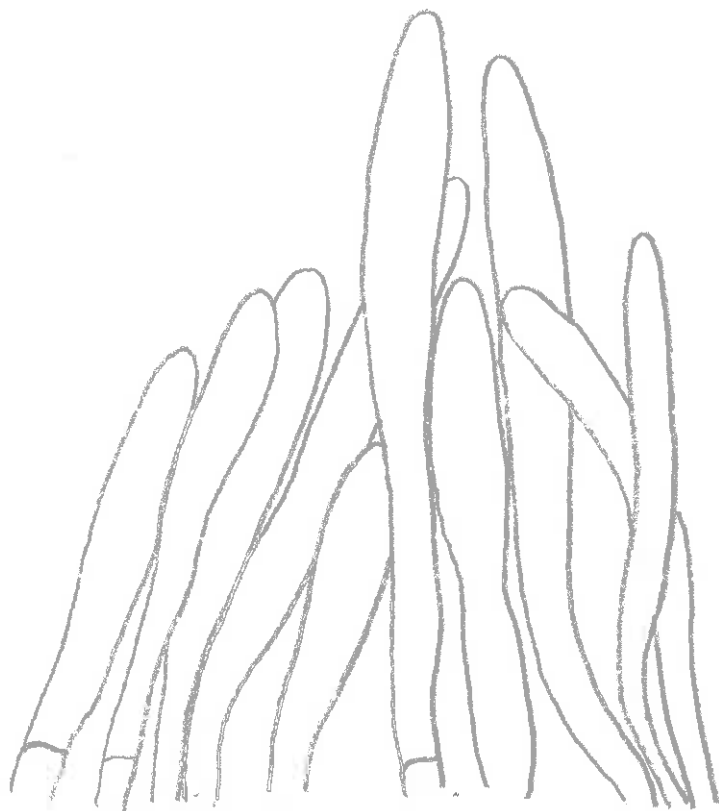
Coll. from Mus. Botan. Stockholm, Uppland,
July 29, 1889. H. Kugelberg.



Ch - x 1000

Scale - pectinidia - x 1000

Leptonia eucroa (Fr.) Kummer
No. 14179



Cuticle (scale) - $\times 1000$

LEPTONIA EUCHROA (Fr.) Kummer

(Bas-Sept. 29, 1954; Tenn.-26248)

Notes by Bas

Cap 24-33 mm, irregularly plano-convex with small umbilicus, pale grayish violaceous-blue, slightly shiny, rather strongly radially fibrillose. Smell strong and very pleasant.

Gills ventricose, adnate, color as cap, paler and with pinkish tinge; edge somewhat darker blue.

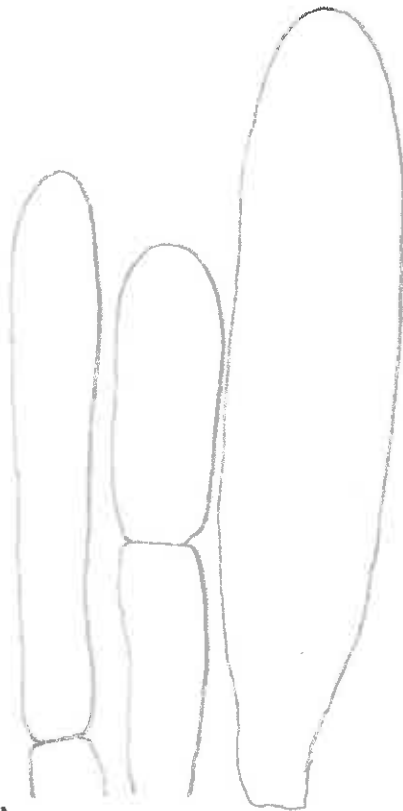
Stem 35-40 x 2.5-3.5 mm, cylindrical, strongly fibrillose, pubescent at apex, color as cap, paler (even whitish) at base.

Notes by Hesler

Spores 9-11 x 5.5-7 μ , 6-7-sided. Basidia 27-31 x 8-10 μ , 4-spored. Pl. and Ch. none. Cuticle fibrillose with pyramidal mounds of brownish, clavate, pileocystidia (the scales). Caulocystidia 44-76 x 6-14 μ , colorless, clavate, cylindrical, or ventricose, in tufts; hyphae of stipe-apex incrusting.

Leptonia euchroa

Bas, Tenn - 26248



Pilo - x 1000



Caule - x 1000

LEPTONIA EXILIS (Fr.) Orton

Orton No. 859, from Royal Bot. Garden, Edinburgh, coll. P. D. Orton, Membury, Devon., Nov. 5, 1956.

Spores 9-13 x 6-8 μ , 5-7-sided, sometimes obscurely so. Basidia 32-37 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 30-60 x 6-10 μ , slender cylindric and capitate, or clavate. Gill trama subparallel, hyphae 6-10 μ broad. Pileus trama radial. Cuticle of repent hyphae, with more or less erect, colorless hyphae, the terminal elements clavate. Clamp connections none.

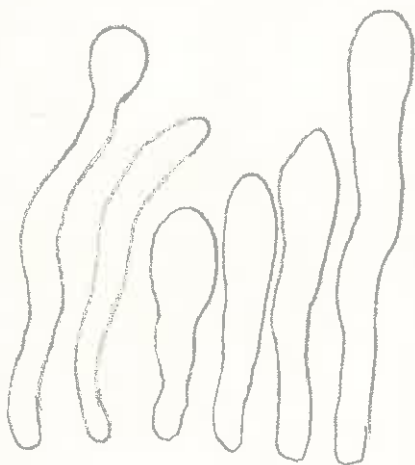
LEPTONIA EXILIS (Fr.) Orton

Orton No. 859, from Royal Bot. Garden, Edinburgh, coll. P. D. Orton, Membury, Devon., Nov. 5, 1956.

Spores 9-13 x 6-8 μ , 5-7-sided, sometimes obscurely so. Basidia 32-37 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 30-60 x 6-10 μ , slender cylindric and capitate, or clavate. Gill trama subparallel, hyphae 6-10 μ broad. Pileus trama radial. Cuticle of repent hyphae, with more or less erect, colorless hyphae, the terminal elements clavate. Clamp connections none.

Leptonia exilis (Fr) Oton

Oton 859



Ch - x 1000

24844

NOLANEA EXILIS

Pileus 16 mm broad, convex, obsoletely umbonate, disc smoky-black, elsewhere "vinaceous-drab," atomate, striate to disc. Context pallid to olivaceous; odor and taste mild.

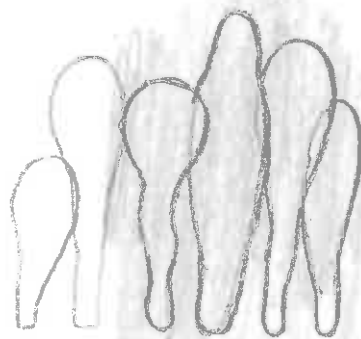
Lamellae uncinatae, white then pink, subdistant, broad, many lamellulae.

Stipe 3 cm long, 1 mm thick, "dark vinaceous drab," base paler, glabrous, hollow, equal.

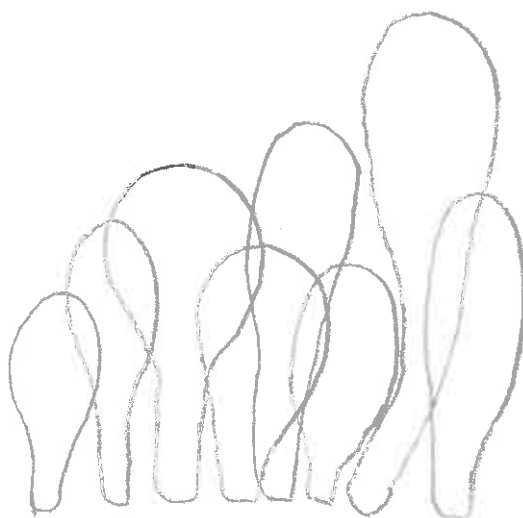
Spores 10-13 x 6-7(9) μ , (5)6-7-sided, at times nodulose. Basidia 30-35 x 8-10 μ , 4-spored. Pleurocystidia none; cheilocystidia 25-37 x 6-10 μ , clavate, clustered, rare, absent in many sections. Gill trama subparallel, hyphae 6-14 μ broad. Pileus trama radial. Cuticle repent, at scattered intervals clavate, colorless pilocystidia present in groups. Clamp connections and lactifers none.

Photophyllus exilis (Fr.) Quel.

Term. - 24844



Ch - x 1000



Pile - x 1000



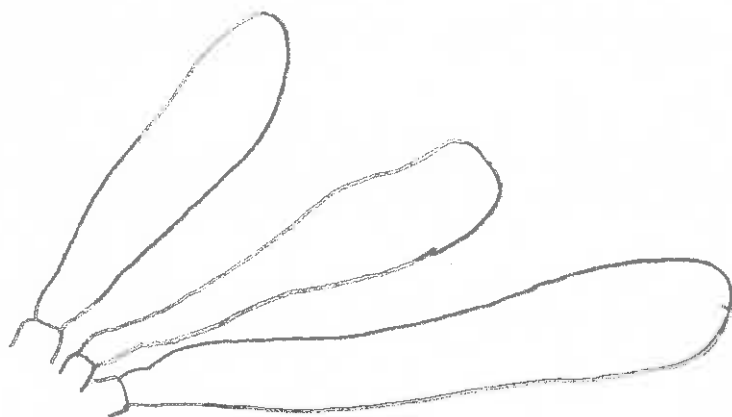
Caulo - x 1000

Nolanea No. 24844

exilis (Fr.) Kummer



Ch - x 1000



Pch. x 1000

"floridana"

Clitopilus floridanus Lloydia 5: 157. 1942. R. floridanus

Eccilia floridana Fla. Acad. Sci. 7:115. 1945. R. farinaceus

Ent. floridanum Fla. Acad. Sci. 7:116. 1945. R. albipes

Leptonia floridana Fla. Acad. Sci. 7:127. 1945. R. umbrinus

Nolanea floridana Fla. Acad. 7:118. 1945. R. fuligodiscus

Rhodophyllus farinaceus (Murr.)
~~*Eccilia floridana* (Murr.)~~

Eccilia floridana Murr., Florida Acad. Sci. Proc. 7:115. 1945.

Pileus 1-2 cm broad, convex, deeply umbilicate, gregarious, hygrophanous, subglabrous, smooth, uniformly avellaneous, margin even, entire, uncurved when young. Context thin, pallid; odor and taste strongly farinaceous.

Lamellae decurrent, pallid then dull-pink, distant, triangular, inserted.

Stipe about 1 cm long, 1 mm thick, pallid, slightly fibrillose, smooth, equal.

Spores 8.5-10 x 6-7 μ , (5) 6-sided. Pleurocystidia and cheilocystidia none. Gill trama subparallel, Subhymenium not distinctive. Pileus trama radial. Cuticle of repent hyphae, some free ends more or less erect. Pilocystidia none. Clamp connections and lactifers none.

HABIT, HABITAT, AND DISTRIBUTION - On soil, Florida, July.

MATERIAL STUDIED - FLORIDA: Murrill F-17887, type, from moist soil, under palms, Gainesville, July 17, 1938.

OBSERVATIONS -

Hand.

~~17*~~ RHODOPHYLLUS PARLOWII Sing.
Parlowia 2:49. 1945

Illustration:

Figure: Parlowia 2, frontispiece (color).

Pileus 21-40 mm broad, convex with a ^{distinct} distant broad umbilicus, rich orange yellow, more yellow between the deeper orange striae, tending to bleach from the center outward, somewhat hygrophanous, glabrous, not viscid, transparent-striate half-way to disc. Context white, at times somewhat concolorous when old; odor insignificant.

Lamellae adnate with a decurrent tooth, or subdecurrent to decurrent, salmon pink to salmon-pale-lateritious, 2.5-5 mm broad, broadest in the middle, close or subclose.

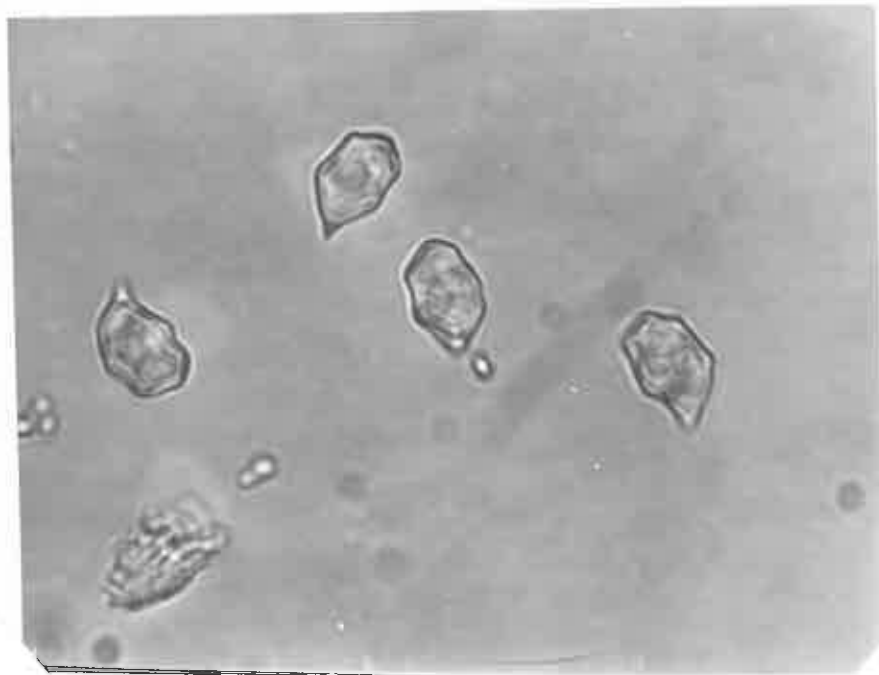
Stipe 50-76 cm long, 2-6 mm thick, concolorous or paler, base more whitish, glabrous, dry, hollow or solid, or stuffed-cavous, equal or slightly tapering upward.

Spores 7-10 x 5-7 μ , 5-6(7)-sided, angles not always prominent. Basidia 26-30 x 7-8 μ , 4-spored. Pleurocystidia none; cheilocystidia 40-45 x 4-10 μ , cylindric to slightly clavate, at times the apex subcapitate, often slightly agglutinated in small tufts. Gill trama subparallel, hyphae 4-8 μ broad. Subhymenium not distinctive. Pileus trama radial. Cuticle of repent hyphae, not sharply distinct from the trama. ~~hyphae~~ Pilocystidia none. Caulocystidia few, cylindric-clavate, occasionally in small tufts.

HABIT, HABITAT, AND DISTRIBUTION - On wood or on humus in mountain forests, and swamps, under Tsuga and other trees, July - September, New Hampshire and Florida.

MATERIAL STUDIED - FLORIDA: Singer P 560 Bb (FH), among mosses, near Sebring, Highlands County, September 6, 1942; NEW HAMPSHIRE: Linder and Singer, type (FH), Pequaket, on Piper Trail, July 25-26, 1941.

OBSERVATIONS - The above account of macroscopic characters is taken from Singer's original description; the microscopic characters are based on a study of the type. Singer states that it is easily mistaken for an Hygrocybe (Hygrophorus). The form he found in Florida is more yellow than orange and perhaps smaller than the New England collections. The two collections are indeed similar microscopically.



Eccilia floridana Murr. - Type

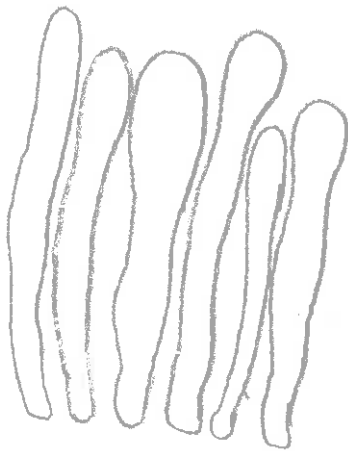
7 17887

R. farinaceus non. nov.

Rhodophyllus farlowii Singer

Florida Collection (Singer 7-560 B &)

(The type is the same in structure)



ch - x 1000

29376

RHODOPHYLLUS FASCICULATUS sp. nov.

On soil, deciduous woods, Cades Cove, Sept. 6, 1966

Pileus cespitose, 3-6 cm broad, convex, finally margin uplifted, pale olive-brown (not matched), disc black, faintly radiately rugose, margin striate. Context whitish, thin; odor slight, taste oily-farinaceous.

Lamellae emarginate, white, then pale pink, close, broad.

Stipe 5-8 cm long, 4-9 mm thick (14, when compressed), pallid, shining, apex pruinose, equal or tapering upward, often compressed, hollow.

Spores 8.5-10(11) x 7-7.5(8) μ , subglobose or ellipsoid, 6-7-sided, sides and angles at times slightly indistinct, color in deposit: "pinkish cinnamon." Basidia 37-50 x 7-10 μ , (1)2-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 8-15 μ broad. Subhymenium not distinctive. Pileus trama radial. Cuticle repent, hyphae radial, brown. Pilocystidia none. Caulocystidia clavate, 23-44 x 6-9 μ , in tufts, colorless. Clamp connections present.

Rhodophyllus fasciculatus sp. nov.
29376 . Type



Caule. $\times 1000$

ENTOLOMA PELLEUM Murr.

Leg. G. F. Weber, near Gainesville, Fla., Jan. 18, 1944,
Murrill-F22493.

Type

Spores 7-8 x 5-6 μ , 5-6-sided, at times obscurely so, ovoid, subglobose, or ellipsoid, pink, Basidia 33-44 x 7-8 μ , 2-4-spored. Pleurocystidia and cheilcosytidia none. Gill trama subparallel, hyphae 10-15 μ broad. Pileus trama radial. Cuticle repent; no pilocystidia. Clamps few on the cuticular hyphae. Lactifers none.

ENTOLOMA FELLEUM Murrill

Lloydia 8:279. 1945

Pileus 5-8 cm broad, convex to plane or slightly depressed, avellaneous, often darker on the disk, margin concolorous, gregarious, dry, glabrous, subvirgate, margin entire, sometimes splitting with age. Context thin, white, unchanging; odor faint and pleasant, taste bitter, not farinaceous.

Lamellae adnexed, rounded behind, slightly ventricose, white to pink, about 1 cm broad, inserted, rather crowded, edges entire.

Stipe 7-10 cm x 15-20 mm, white, subequal, hollow, smooth, glabrous.

Spores 7-8 x 5-6 μ , 5-6-sided, at times obscurely so, ovoid, subglobose, or ellipsoid, pink. Basidia 33-44 x 7-8 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 10-15 μ broad. Pileus trama radial. Cuticle repent; no pilocystidia. Clamps few on the cuticular hyphae. Lactifers none.

HABIT, HABITAT, AND DISTRIBUTION - On soil, in a dried pond, Florida, January.

MATERIAL STUDIED - FLORIDA: Murrill F22493, type, collected by G. F. Weber, Cary Forest, near Gainesville, Jan. 18, 1944.

E. felleum

OBSERVATIONS - The description of microscopic characters above is based on a study of the type. Murrill says it suggests Ent. grayanum but the taste is bitter (not farinaceous), the pileus becomes murinous when dried, and the spores of E. felleum are smaller than those of E. grayanum.

ENTOLOMA FERRUGINANS Pk.

Bull. Torrey Bot. Club 22: 200. 1895.

Pileus 5-¹⁵~~10~~ cm. broad, convex, obtuse or umbonate, hygrophanous, shining, gray or lead-colored to almost black, glabrous, at times finely striate. Context whitish, fibrous and colored at the surface; odor and taste farinaceous in young plants, at length nauseating.

Lamellae adnexed, grayish-salmon, becoming clay-colored, subcrowded, relatively narrow to rather broad.

Stipe 7.5-10 cm. x 10-30 mm., white to subconcolorous, glabrous, base blunt or at times attenuate and radicate.

Spores 8-11 x 6.5-8 μ , ellipsoid to subglobose, 6-sided, rarely 5-sided. Basidia 32-40 x 7-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-7 μ broad. Pileus trama of radial hyphae. Cuticle repent, some surface hyphae more or less uplifted in sections. Clamp connections none. Lactifers present in the pileus trama, broad (6-12 μ).

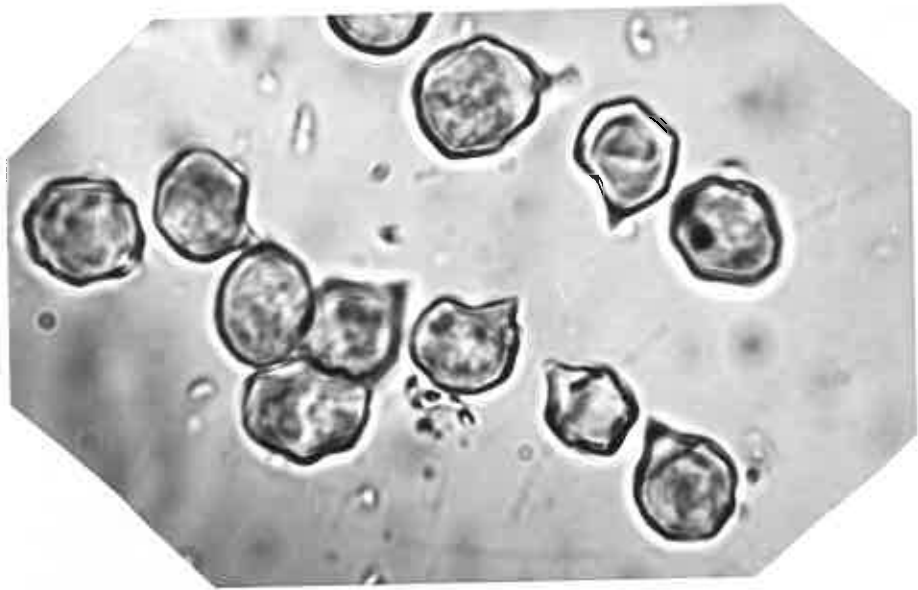
Habit, habitat, and distribution. - On soil, under oak trees, California, February.

Material studied. - CALIFORNIA: Peck's type, No. 870, collected by A. J. McClatchie, Pasadena, Feb. 10, 1895.

Observations. - The description of microscopic characters above is based on a study of the type.

Peck (1895) gives the stipe diameter as 4-8 lines or more; Muirvill (1917) says 1-3 cm. The latter is more nearly correct. (over)

McClatchie (see Peck, 1895) says the
fresh plants have a strong odor of
ferric chloride. Muirill (1917) says
the odor + taste are farinaceous.



Entoloma ferruginans PK. - Type

X

NOLANEA FIBRILLOSA Pk.

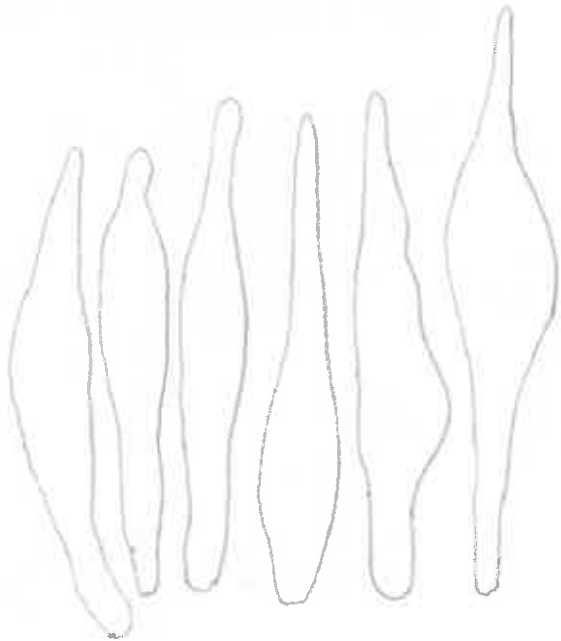
Type

(from Floodwood, Franklin Co., N. Y., Sept.)

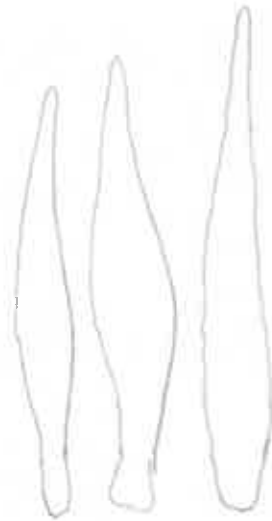
Spores 11-16.8 x 7.5-9 μ , 6-8-sided, often more or less nodulose and obscurely 6-8(9)-sided, ~~slightly asymmetrical~~. Basidia 32-40 x 10-12 μ , 2-4-spored. Pleurocystidia ⁴⁸~~52~~-70 x 6-14 μ , fusoid, subcylindric, clavate, obclavate, irregular and variable, apex more or less tapering, scattered, few; cheilocystidia 40-46 x 6-10 μ , ventricose, more or less appendiculate, few. Gill trama subparallel, hyphae 5-8 μ broad. Pileus trama radial. Cuticle of fuscous hyphae, often uplifted as tufts of pilocystidia. ^{connections} Clamps[^] and lactifers none.

Nolanea fibrillosa OK.

No. 12249



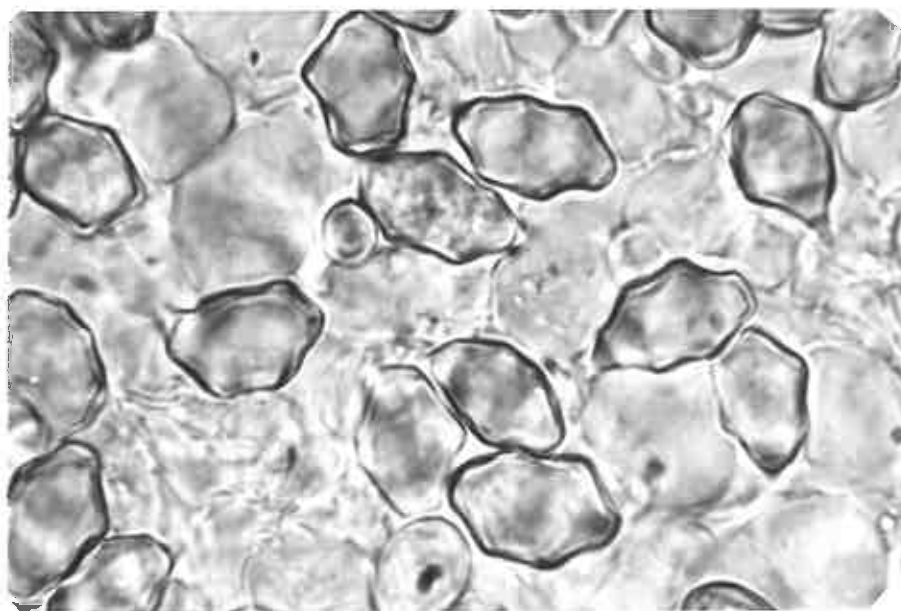
Gl - x 1000



Ch - x 1000



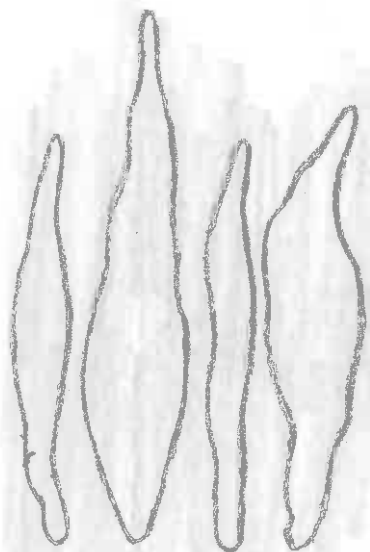
Pilocyptidia - x 1000



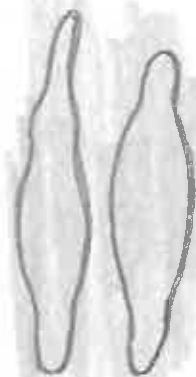
Nolanea fibrillosa Pk. - Type

~~x1700~~ x1800

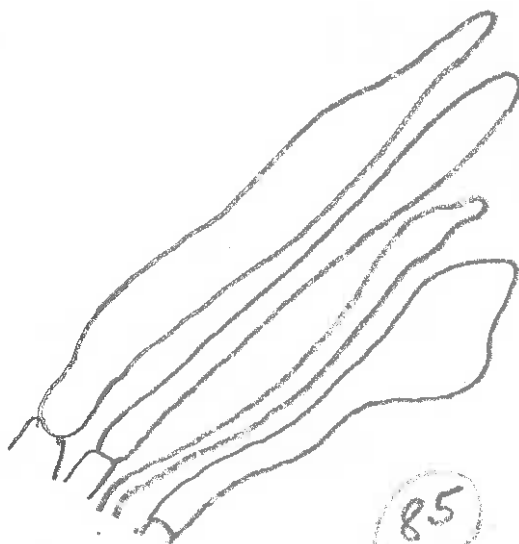
Nolanea fibrullosa PK.
Type



Pl. - x 1000 (83)



Ch. - x 1000 (84)



Pilo. - x 1000 (85)



Nolanea fibrillosa PK. - Type
x 1700

Photo by T.H. Campbell

Nolanea fibrillosipes Murr.

~~NOLANEA FIBRILLOSIPIES Murr.~~

N. A. Flora 10:100. 1917

Pileus 1.5 cm. broadly conic, not expanding, slightly depressed at the apex, uniformly blackish-fuliginous, clothed with fine whitish fibrils, somewhat striate when moist. Context rather firm.

Lamellae adnexed, umbrinous, distant, medium narrow, somewhat ventricose, villose on edges.

Stipe 6.5 cm. x 2 mm., concolorous, cartilaginous, base somewhat contracted, clothed with conspicuous whitish fibrils which are longer than those on the pileus.

Spores 16-20 x 7-9 μ , 6-9-sided, often obscurely so and nodulose, ~~symmetrical~~, with a long apiculus. Basidia 38-61 x 12-14 μ , 1-2-4-spored, sterigmata long. Pleurocystidia none; cheilocystidia of the tramal type, fuscous or pale, usually septate-constricted, terminal cell 28-63 x 10-25 μ , very striking and conspicuous when present, absent in many sections. Gill trama undulating subparallel. Pileus trama radial, ~~(as pseudoparenchyma in tangential sections).~~ Cuticle repent, with more or less of a trichodermium of colorless or fuscous hyphae, the terminal elements ~~as pileocystidia~~ ~~more or less clavate~~. Clamp connections and lactifers none.

Habit, habitat, and distribution. - In Sphagnum, New York, October.

Material studied. - NEW YORK: Murrill 459, from Lake Placid, October 3-14, 1912.

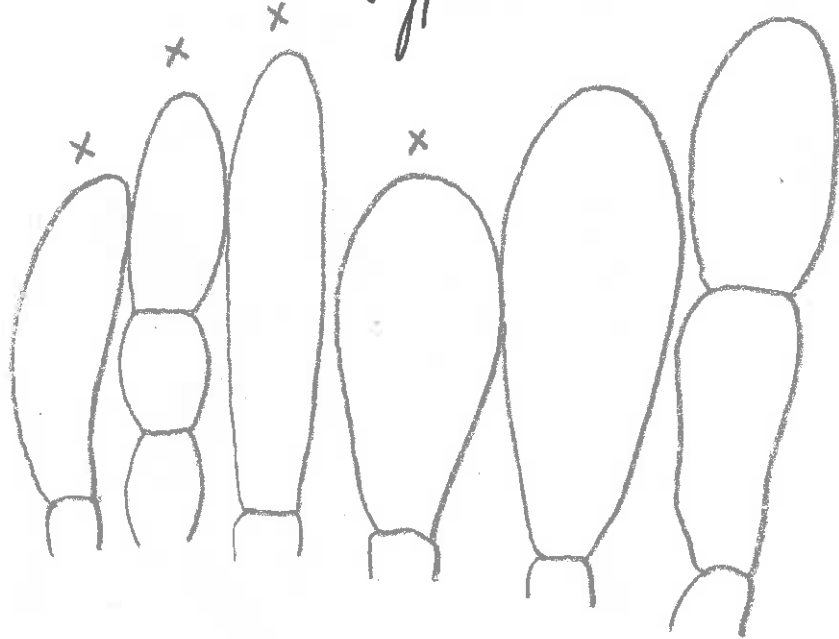
Observations. - Notes on microscopic characters above are based on a study of the type.

(over)

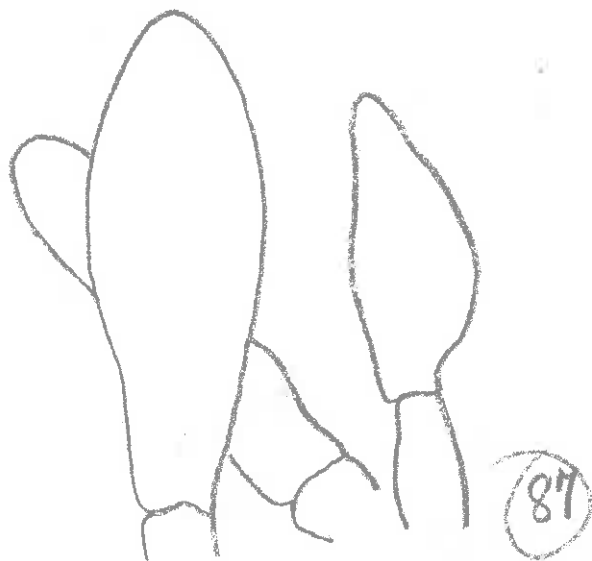
~~The tramal cheilocystidia are unique in being~~

The tramal cheilocystidia are unique in being more or less constricted, and septate.

Nolanea fibullosipes Murr.
Type



Ch - (Kramal) x 1000 (86)



Pilocyptidia - x 1000



Nolea fibillosipes Murr. - Type

X 1800

Eutoloma fibrillatum Murr.
~~XXXXXX~~

~~EUTOLOMA FIBRILLOSUM (Murr.) comb. nov.~~

~~North Amer. Flora 10:117. 1917.~~

~~Eutoloma fibrillatum Murr.~~

Pileus 2-3 cm. broad, umbonate, uniformly fuliginous when young, becoming umbrinous with age except the disc, closely covered with minute, imbricate, fibrillose, fuliginous scales, dry, margin even.

Lamellae deeply sinuate, pallid to salmon-colored, medium broad, ventricose, subdistant, edges floccose or finely serrulate.

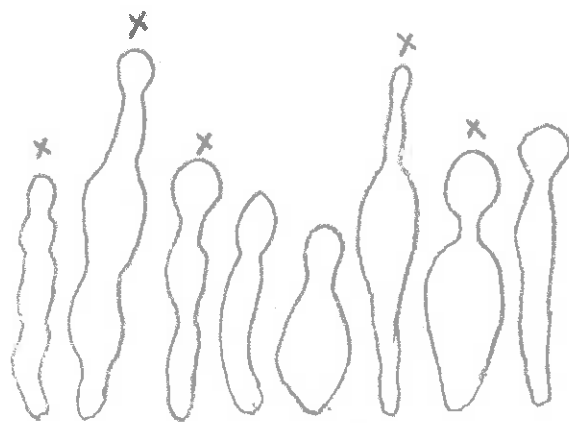
Stipe 4 cm. x 2-3 mm., subconcolorous, pubescent to subglabrous, attached to a mat of white mycelium, hollow.

Spores 8.5-10 x 6-7.5 μ , 6-sided, at times obscurely 6-7-sided. Basidia 34-43 x 8-11 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 24-50 x 5-11 μ , variable: ~~in various~~ cylindric-subcapitate, flask-shaped and capitate, clavate and appendiculate, often more or less constricted. Gill trama subparallel, hyphae 6-8 μ broad. Pileus trama radial. Cuticle repent, with numerous tufts of large (45-160 x 8-24 μ), cylindric-clavate, fuscous pilocystidia. ^{connections} Clamp^A and lactifers none.

Habit, habitat, and distribution. - On much decayed wood, in woods, Maine, September.

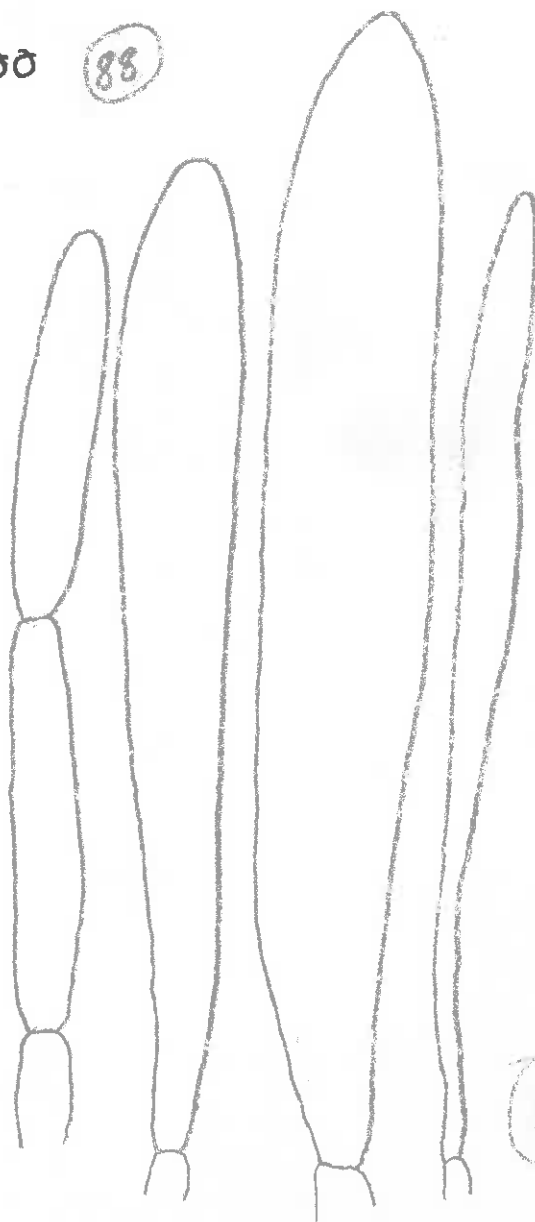
Material studied. - MAINE: Murrill 2620, type, from Sebec Lake, Piscataquis County, Sept. 16-17, 1905.

Eutoloma fibrillosum Murr.
Type



Ch - x 1000

88



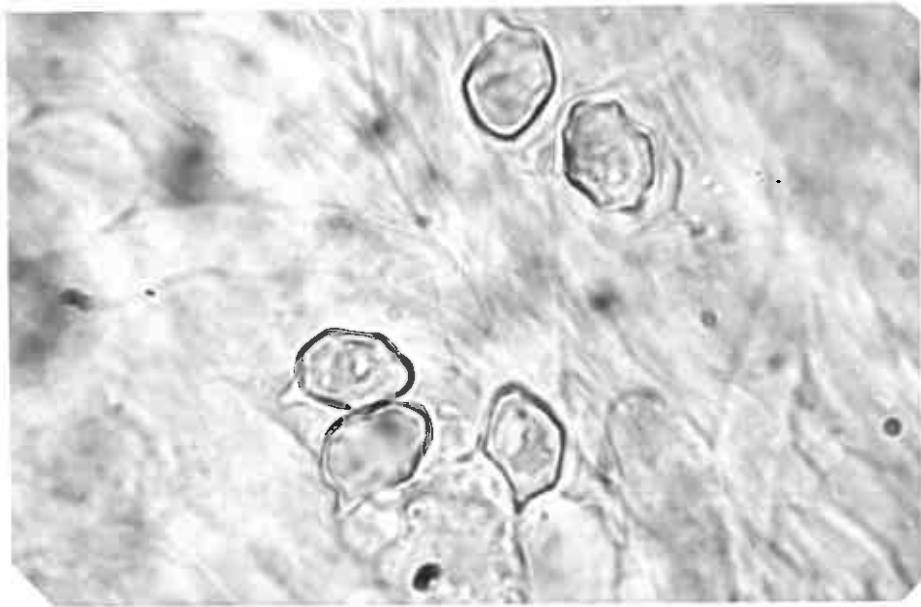
Pilo. - x 1000
(fuscous)

89



Entoloma fibrillosum Murr. - Type

x 2000



Entoloma fibrillosum Murr. - Type

x 2100

LEPTONIA FLAVIDA (Pk.) comb. nov.

Eccilia flavida Pk., Torrey Bot. Club Bull. 36:153. 1909.

Illustration:

Pileus 2-2.5 cm broad, convex, umbilicate, pale-yellow, glabrous, obscurely striate when dry. Context thin.

Lamellae decurrent, somewhat crowded, rather broad, thin.

Stipe 2.5-3.5 cm x 1.5-2 mm, concolorous or a little paler, glabrous, commonly with white mycelium at the base, hollow.

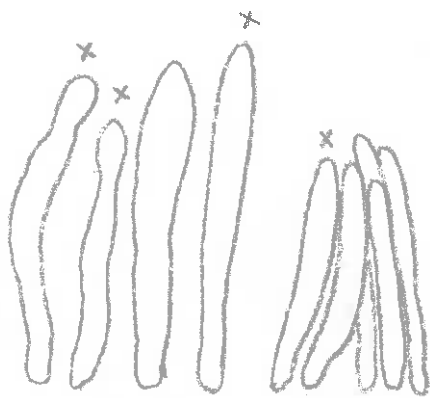
Spores (8) 9-^{11.5}~~11.5~~x (5.5) 6-7 μ , 5-6-sided, at times obscurely 6-7-sided. Basidia 30-34 x 7-8 μ , 2-4-spored. Pleurocystidia none; cheilocystidia 30-46 x 3-6 μ , slender-clavate to cylindric, often appressed against gill-edges and easily overlooked, at times appearing somewhat agglutinated. Gill trama parallel to slightly subparallel, hyphae 5-8 μ broad. Pileus trama radial (appearing as pseudoparenchyma in tangential sections). Cuticle repent, with numerous, lightly tangled, more or less erect or semi-erect hyphae. Clamp connections and lactifers none.

Habit, Habitat, and Distribution - Massachusetts, August.

Material Studied - MASSACHUSETTS: Peck, type (NYS),
from near Stow, August 11, 1908.

Observations - The description of microscopic characters
above is based on a study of the type. Peck's Eccilia cineri-
cola, treated here as Leptonia cinericola, is a white species
with a yellow tint which becomes cream colored in age, but
this latter species has larger spores and lacks cheilocystidia.

Leptonia (Eccilia) flavida PK.
Type



Ch. - x 1000

(18)



Eccilia flavida O.K. — Type
x 1700

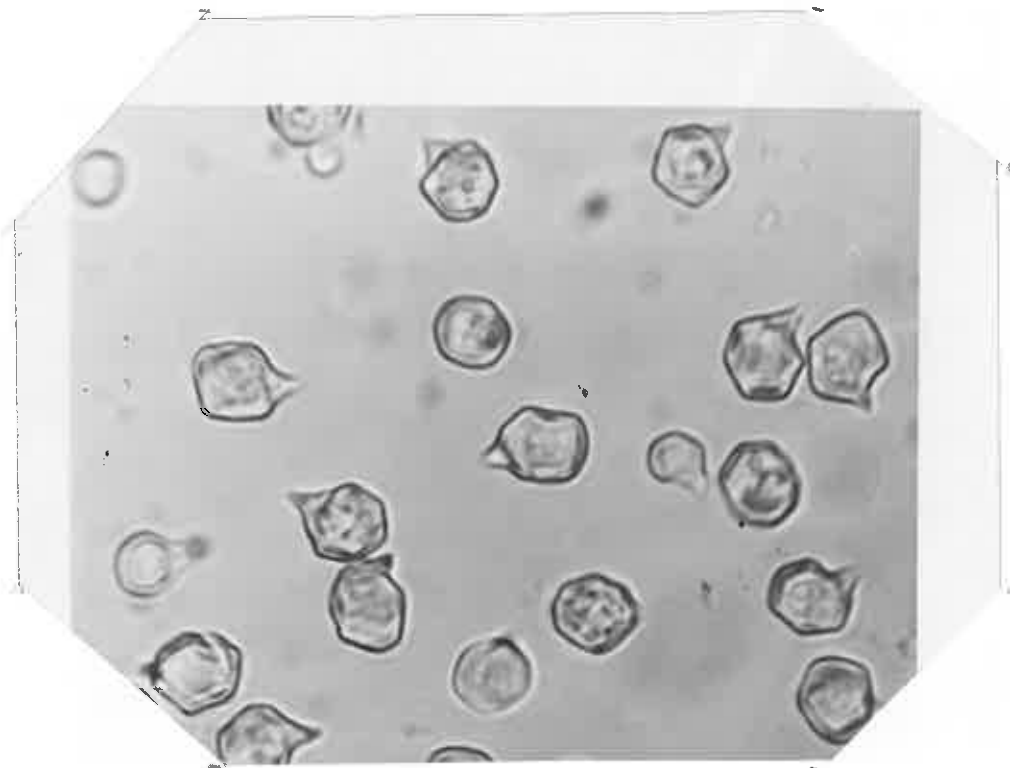
ENTOLOMA FLAVIPOLIUM Pk.

Type

Spores 8-10 x 7-8 μ , 5-6-sided, ovoid, subglobose, or ellipsoid. Basidia 25-32 x 7-8 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 5-8 μ broad. Cuticle repent, some surface hyphae loosened and more or less upright. Clamps and lactifers none.

The dried pileus of the type is near "sage brown", and the gills rather narrow.

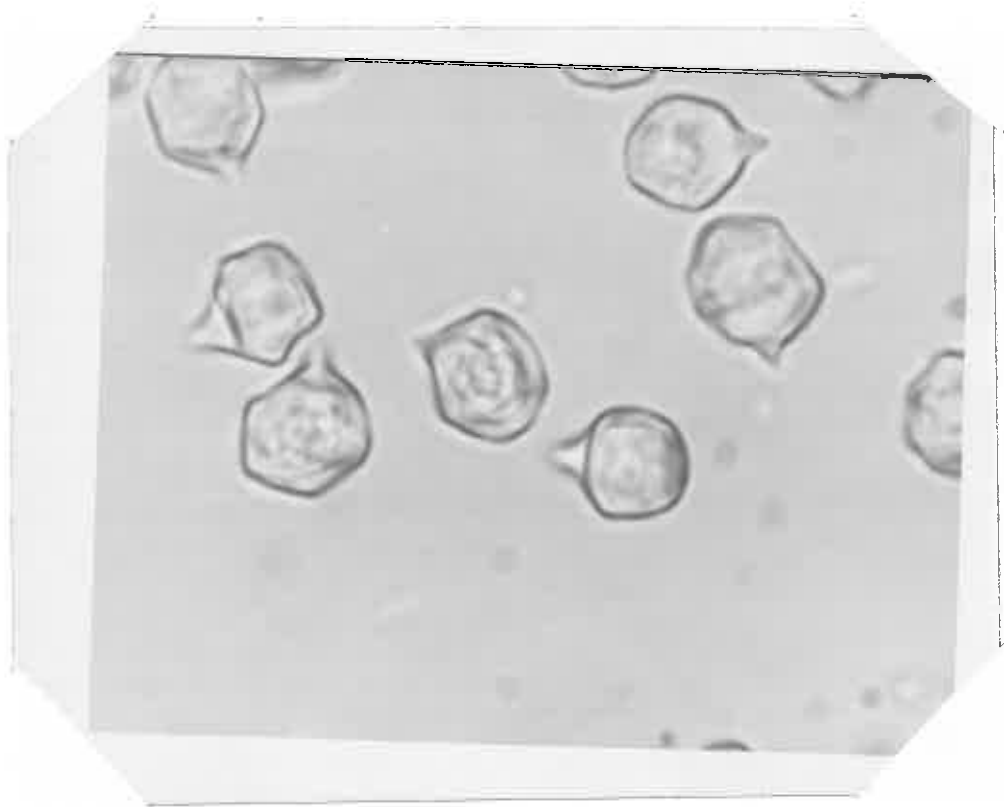
The type was from dense woods among fallen leaves, Port Henry, Essex County, N. Y., August 8, 1905 (pub. in N. Y. State Mus. Bull. 105:21. 1906).



Eutoloma flavifolium PK. - Type

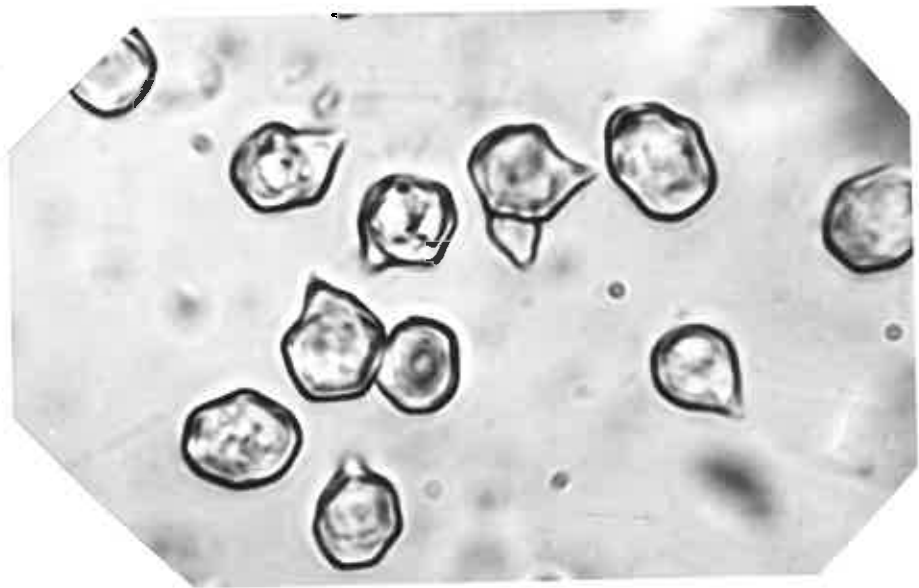
x 1700

Photo by T. H. Campbell



Eutoloma flavofolium PK. - Type

x 2100



Eutoloua flavifolium Ok. - Type

X

See other photos

NOLANEA FLAVOVIRIDIS (Pk.) comb. nov.

Entoloma flavoviride Pk., N. Y. State Mus. Ann. Rept. 41:64. 1888.

Pileus 12-24 mm. broad, broadly conical, then convex or subconcave by the upcurving of the margin, dingy yellowish-green or olive-green, slightly silky and shining when dry. Context thin.

Lamellae free or slightly adnexed, dingy or cinereous, subdistant, broad, ventricose.

Stipe 2.5-6.5 cm. x 2-4 mm., whitish, fibrous-striate, equal, hollow.

Spores 10-13 x 7-8.5 μ , 5-6-sided, at times obscurely so, more rarely slightly nodulose. Basidia 28-37 x 7-10 μ , 2-4-spored. Pleurocystidia and cheilocystidia none. Gill trama subparallel, hyphae 6-8 μ broad. Pileus trama radial. Cuticle repent, an occasional short hyphae more or less erect to repent. Pilocystidia, clamp connections, and lactifers none.

Habit, habitat, and distribution. - In low, swampy woods, New York, August, 1887.

Material studied. - NEW YORK: Peck's type, collected by him at Karver, August, 1887.

Observations. - The description of the microscopic characters above is based on a study of the type.

Murrill (N. A. F. 10:126. 1917) says (under "Doubtful and Excluded Species") that the type is poor, but it appears to be a depauperate form of Entoloma luteum; in which case the name

would have precedence over E. luteum. But, ↗

I found the type in normally good condition, and further I regard E. flavoviride as quite distinct from E. luteum. The former has 5-6-sided spores, and ^{lacks} neither cheilocystidia ^{and} pilocystidia. ~~are present~~ See : Smith, *Annales Mycologici* (reprint) 32: 473. 1934; he reports cystidia.



Entoloma flavoviride PK. - Type

X